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News Print Prices for Next Year Discussed

Premiers of Ontario and Quebec Confer With Heads of News Print Industry at Montreal—Offer Their Services to Assist Pulp and Paper Manufacturers In Their Efforts to Arrive at New Agreement or to Continue Present One—View Expressed That Provinces Will Not Tolerate Renewal of Cut-Throat Competition

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., November 18, 1929.—Significant developments have taken place here during the past week in connection with the question of next year's prices for news print. That the Provincial Governments are deeply concerned in the matter is shown by the fact that Premier Ferguson, of Ontario, made a special journey to Montreal to confer with Premier Taschereau, and that following their meeting they held a joint conference with heads of the news print industry. As is well known, the arrangement which the two Premiers made with the news print companies a year ago expires on January 1 next, and that they are as deeply concerned over the situation which is to follow as they were over the situation last year has been made abundantly clear by both.

It will be remembered that on November 23, 1928, it was announced that an agreement had been reached for the stabilization of the news print situation in Canada, as a result of conferences of practically all the news print producing companies, with the Premiers of both Provinces sitting in, accompanied by the respective Ministers of Crown Lands. It was announced at the time that the industry was to divide the business which existed in an equitable manner, Premier Ferguson stating that the manufacturers had taken the very same position as the governing authorities, namely that there was a certain amount of consumption and that the industry must share it equitably.

Current Requirements Higher

In a recent survey of the industry it was stated that since the plan became effective the mills have operated at about 85 per cent of their rated capacity, which was regarded as a high figure for any industry, but not above market requirements. It was also stated that current requirements were about 14 per cent greater than a year ago.

After the conferences during the past week, Premier Taschereau said that he and Premier Ferguson had offered their assistance to the pulp and paper companies "in case such good offices should be needed by the companies in their efforts to arrive at a new agreement or to continue the present agreement." To those who know the strong views held by both Premiers on the situation this is regarded as a diplomatic intimation that the Governments of the two provinces will not tolerate a renewal of cut-throat competition, but will take immediate and drastic action to discipline any concerns whose policy may be construed as tending to upset the apple cart.

"The news print executives may not need our help," Premier Taschereau said in an interview, "but it is offered willingly and gladly. The news print industry in the Provinces of Quebec and Ontario has operated during the last year on a basis of about 85 per cent of capacity, and it has been announced that consumption has increased approximately by 12 per cent during the year, so that it can be seen that the situation has been greatly stabilized.

"It is not expected that consumption of news print will increase materially in Canada, for it is said that newspapers have attained, for the most part, their limit of development as regards the number of pages. It must not be forgotten that radio has become a medium of publicity and that manufacturers employ it in many cases."

Mr. Taschereau added that he had also discussed informally with Mr. Ferguson the questions of hydro-electric development on waters located between the Provinces of Ontario and Quebec, but that he had nothing more to say on the question.

Premier Ferguson's Views

Premier Ferguson, in the course of an interview at the conclusion of the conferences, said:

"I have followed the practice of meeting Premier Taschereau occasionally, in order to work out plans for the co-operation of both provinces. I believe we need this provincial co-operation if we are to develop Canada's interests in the best way," Mr. Ferguson said in an interview.

"Have these discussions recently achieved anything you could name?" he was asked.

"Why, yes," replied Mr. Ferguson. "We discussed and reached conclusions on the paper industry.

"I believe it is the duty of the provinces to aid in the expansion both of their own and the Dominion's interests in this way and sometimes the effects of our actions have extended far beyond the provincial boundaries. The immediate development must take place under provincial jurisdiction, but its influence and effect are often made to extend beyond, and contribute to the interest of all Canada.

"Occasionally too, I have conferences with the other provincial premiers with a view to discussing mutual interests. These provincial conferences are good things, and contribute to the development, as a whole, of Canada."

Enquiry from news print executives elicited the information that committees were still working on certain phases of the situation, but there was nothing definite to report.

Big Developments on Pacific Coast

It is becoming evident that the greatest developments of the immediate future in the pulp and paper industry in Canada will be on the Pacific Coast. Particulars have already been given in this

(*Continued on page 70*)

Philadelphia Paper Demand Somewhat Slower

Cautious Attitude Is Manifested by Buyers in Making Forward Commitments—Fine Papers and Wrappings Less Active—Leatherette Papers Show Big Expansion—Garrett-Buchanan Co. Make Plans to Expand Van Reed Division

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., November 18, 1929.—Continued spotty demand for fine papers has been noted throughout the week just past as the consumers are buying only for the present day requirements after a brisker early October market which was most encouraging for the remaining months of the year but which turned a fortnight or so ago into the present cautious attitude that seems to mark trading in all lines of industry here. Though larger orders are slower there is a fairly good buying movement in the small lots with a generally active list of paper adapted for the season's needs moving from warehouses and shelves. Wholesalers of fine papers while less active already had secured contract orders for the month and for the remaining weeks of the year that will hold the demands to the volume consumed for the entire fall season. There has been broader consumption of uncoated book papers which makes for a normal market after a steady improvement throughout the late summer and autumn. Coated papers are moving more freely as the Christmas advertisements require more of the grades adapted for illustrations of gift wares after lagging along for the greater portion of the year, and like the uncoated grades there is a firmer price set upon these lines more in keeping with the standard values of a normal business period. Better grade of writing papers, bristol boards, card stocks and announcements all have a livelier market although hand to mouth buying again prevails. Manufacturing stationers are in the market for materials that will be needed for the inventory of the year end and for the opening of new business in the coming year. Paper stocks used in the manufacture of bookkeeping requisites and ruled forms and printed business forms, just now are being made up by the manufacturing stationers and the business is passed on to the paper dealers.

Wrapping Paper Markets Quieter

Lessened demands in wrapping papers and specialties unusually active at this time has been noted this week. Like the fine paper division there is buying in small quantities that will meet day to day demands until the trend of business brings about restored confidence. There has been little cancellation of old standing orders that were given a few weeks back but new business is more difficult to secure. The good weather that has been noted this fall and particularly in the past week has brought about a livelier business to those dealers handling hot weather specialties such as drinking cups, towels, sanitary products, and waxed and parchment papers are enjoying a summer time demand for the full line. Tissues are lively and steady in values. Builders' supplies continue to move in good volume and are holding in price. Bags are steadier and glassines continue to show improvement as shipments increase. Paper board manufacturers are fairly active but the demand for tonnage orders shows decreasing business as the year end approaches and box manufacturers are less active. Those manufacturers producing leather substitute papers are reported enjoying a larger demand as many of these grades are being consumed by various industries heretofore not in the market for such products. Leather substitute papers are being used for a wider number of purposes.

Leather Substitute Paper In Demand

As the use of leather substitute papers grows in many industries that are former consumers of leather and cloth leatherettes the manufacturers of these grades are growing prosperous and producing on broader scales a wider variety of leather effects. These leather like papers are produced in all grains and colors and have all the properties of the leather hides for conversion into many products such as baggage, book covers, use in coverings for radio and talking machine supplies such as loud speakers, cases for musical instruments and all other lines of instruments, leather belts, table covers, wall papers, furniture upholstering, numerous small merchandise such as pocket cases, pocket books, hand bags, frame covers, shoes and decorative panels in home furnishings and a wider range of products than ever before and where the use of these was entirely unknown.

Franklin Paper Co. Larger Producer of Leather Papers

Among the outstanding firms engaged in the production of leather substitute papers that are adapted for consumption in a wide range of industries is the Franklin Paper Company, 810 Sansom street, which has been developing its Frankot brands until there are more than one dozen leather effects in the various assortments it produces. Paper jobbers have been increasing their demands for these papers as new avenues of consumption become known. The leather substitutes are growing in use as cover papers where a durable and rich leather effect that will take die stamping is desired for catalogues and other matter where metal lettering and designs are imprinted. The Frankot papers have been gaining nation wide distribution as distributors are frequent inquirers for the leather papers as they learn of sources of consumption in their communities. The firm has been experimenting in leather papers for more than 15 years and were pioneers in the perfection of these wares. The laboratory experiments began in the war days when leather was scarce and substitutes were badly needed. Since then the firm has concentrated on leather substitutes seeking new industries and perfecting papers that were especially adapted for them after a survey and research of the qualities desired by a particular consumer. A laboratory of research and experimenting still is maintained and as new papers are perfected the Frankot Line is expanded.

Garrett-Buchanan Co. To Expand Van Reed Division

Having recently acquired the business of the Van Reed Paper Company of Reading, Pa., the Philadelphia firm of Garrett-Buchanan Company, 18-24 S. 6th street, is planning the expansion of business in the up State territory which is covered by the subsidiary concern. The Van Reed Company has several large mill representations in the Reading territory and these are to be expanded under the new regime. Among the lines of papers which the Van Reed Company represents is the Hammermill and the firm is selling agent for the Champion Coated Paper Company. The firm also sells a complete line of wrapping papers and these will be augmented by those that are also carried by the local house. Under the transfer of the business to the Garrett-Buchanan Company, the entire personnel of the Van Reed Paper Company remains intact as a selling and executive organization and with the addition of Isaac J. Zinn, of the Reading territory representation of the Garrett-Buchanan Company to the staff the only change is made. Mr. Zinn has represented the local dealers in the up State trade for several years and will make the Van Reed Company his headquarters. The territory distribution is to be expanded with the addition of larger area to come under the Reading branch.

Paper Trade To Hear of Credits

The first of the educational talks which will be scheduled by the Philadelphia Paper Trade Association in the coming season will be given at the meeting of the Fine Paper Division to be

held at the Benjamin Franklin Hotel, on Wednesday of this week. Under the special arrangements which have been made to give to the trade these business informative and educational topics there has been secured for the Wednesday meetings discussion an able exponent of credits John E. Norvell, of the Philadelphia Association of Credit Men. He will lay before the paper trade various credit systems and means that are followed by other groups than the paper trade, and which are applicable to the paper industry, as well. Under the plans of the Paper Trade Association other talks will be held in the course of the season on other factors relating to business conduct and administration for the purpose of promoting the welfare of the paper men and the industry with which they are associated. This work is being planned by a committee composed of leading fine paper dealers including N. A. Considine, Paper House of Pennsylvania; Leon Beck, Charles Beck Paper Company, and Leo J. Supple, of the Whiting Patterson Company who will arrange the schedule of speakers and topics.

Riegel & Co. Extends Paper Lines

Extension of the lines carried by Riegel & Co., Inc., 140 N. 6th street, provides for the addition of several new grades of papers which heretofore have not been stocked. In conformity with the plans that mean expansion of business under the recently-reorganized controling interest there have been added the Warrant Bonds the firm's own mark; the Fujiyama fancy writing paper and bristols made by the American Writing Paper Company; L'Envoi, high class papeteries of the Parsons Paper Company, in wove and laid grades; the Polychrome Enamel produced by the Appleton Coated Paper Company and the Cloud Tone fancy blank stock manufactured by the Beveridge Paper Company. After the New Year, there will be incorporated under the Paper Merchants, Inc., the new title of the company, a group of paper men who have been associated with the business for several years which will continue the paper concern of Riegel & Co., Inc., and take over its assets and good will. Those who will head the firm as the Paper Merchants, Inc., are President, Edward McCorkendale; Treasurer, Winfield Predmore, and Secretary R. L. McCall. Arthur B. Sherrill, present vice president of Riegel & Company, Inc., will retire from the firm.

Whiting Paper Co. Holiday Lines

With an assortment of more than 200 numbers of holiday gift papeteries, the Whiting Paper Company, Philadelphia Branch at 619 Chestnut street, is giving an unusual selection of quality papers to the trade and with a lively demand for the complete line. There are many of the newest kinks in paper manufacture applied to the papeteries that are included in the 1929 offerings of this New England manufacturer. They are in the latest tapestry covered containers, have the lined envelopes and are also packed in the latest sliding drawer novelty boxes which may be used for other purposes after emptied. There has been a good demand for the larger more expensive boxings that have been well taken by the stationery and paper trades and the gift and art shops. Repeat orders for the restocking of depleted holiday lines have been excellent. There also are shown now the new lines that will constitute the standard year round papeteries for the year of 1930 and which will be shipped this month to the dealers ready for introduction at the Christmastide or for the new year, Philadelphia manager D. F. Coots, reports a good advance buying for the new year as well as for the Christmas stocking.

Whiting Paterson Co. Staff Meeting

For the purpose of giving its staff a few pointers on the merchandising of envelopes, the Whiting Paterson Company, 314 N. 13th street, held a combined dinner and business meeting at the Benjamin Franklin Hotel last Wednesday. The meeting was particularly interesting to the staff as it had been arranged that George Gaw, of the Gaw-O'Hara Company, envelope manufacturers of Chicago and among the largest producers in the West, address the salesmen and executives of the company. There were 25 associates of the Whiting Paterson Company at the dinner table and they were given beneficial talks on merchandising by those who were included in the list of speakers for the occasion from the firm's executives. Mr. Gaw who is particularly well equipped to talk on the merchandising of envelopes as expert went into at length all the factors that enter into successful marketing of these trade wares and laying before the staff his own progressive methods. President Allen E. Whiting of the company presided and introduced the Chicago associate with a brief word on the purpose of the gathering and its educational topic. Others who gave talks on merchandising before the general discussions by the staff were Sales Manager Leo F. Supple and Ross W. Fishburn, manager of the envelope department. Their talks were along the same lines as Mr. Gaw's with particular phases relating to local needs.

Boston Paper Market Conditions

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 18, 1929.—The paper market here is steady, with a moderate demand as a whole continuing. Generally speaking, the fall season has been satisfactory, with a good demand for both fine and coarse lines of paper. The call for material for Christmas uses has been active. The stock market influence on this center has not been so potent as possibly in most other parts of the country, and industries here seem to have experienced no very serious result, largely because of a generally conservative attitude of business interests. The demand for necessities, under which category paper may be included, has not been affected so much as that for luxuries.

The demand for box board is apparently narrowing because inventory period is approaching, when mills do not care to have on hand any more material than is needed. Concerns which usually order a car-load or two at a time, now ask for only four or five tons. It is understood that buyers for at least several companies have had instructions to keep their purchases down as low as possible. The trend towards hand-to-mouth buying is even more definite than it was. The trade continues to condemn the price situation, which remains the same.

Old papers are quiet with a weakening tendency. Buyers are apparently following a conservative policy, with the approach of the inventory season. A few grades have actually been marked down, such as old kraft, now quoted at a minimum of 1.65, compared with a previous minimum of 1.75. In old newspapers the range is now .50 to .55, compared with a former one of .55 to .57½. The rag situation is likewise quiet for similar reasons, as that of the old paper market. Members of the trade say there is no decline in prices. The rope market is a little weaker, both in the foreign and domestic grades, although values are not quotably changed. Book stock is weak. The general situation, however, appears encouraging, and it is expected that there will be an increase in business, although manufacturers will still have an eye to the inventory.

Reduced Freight Rates Sought in Wisconsin

APPLETON, Wis., November 18, 1929.—Freight rates which will make it possible to dispose of lime sludge from paper mills more easily are sought in Wisconsin. The Mosinee Paper Mills Company, Mosinee, Wis., has petitioned the Wisconsin Railroad Commission asking a reduction of one-third. It is contended that the sludge is valuable to farmers and as such should be considered from the conservation standpoint. The Nekoosa-Edwards Paper Company, of Nekoosa, Wis., is also interested in the case as that company produces 27,000 tons of sludge a year and last season gave way 15,000 tons to farmers who were able to haul it in their own trucks. Quantities also were shipped by rail and all the farmers paid was a slight loading charge. The kraft mills supplying sludge are located in an important farming community and as such are valuable to the agricultural industry.

Chicago Paper Market Exhibits Improvement

Sales Representatives of Leading Paper Organizations Generally Optimistic—Better Grades of Fine Paper Moving In Excellent Volume—Wrapping Paper and Tissues Display Increased Activity—Board Market Shows Some Signs of Betterment

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., November 18, 1929.—Indications of undeniable improvement are cropping out in the Chicago market as the last half of November gets well under way. In this vicinity, were there are a large number of sales representatives, the tone is optimistic in practically all lines. Unmistakable signs of betterment in the board market are reported. Production in this line has been good in order to meet a steady demand, but the price situation has been the reported weak spot. Indications point to a better condition in prices.

Wrapping papers and tissues are rapidly sliding into their busiest seasons of the year. Despite the antics of the stock market, department stores look for a good holiday trade and wrapping papers and tissues will benefit accordingly. The better grades of fine papers are going along in good shape with the market steady and prices reported firm. News print is being consumed in large guantities by newspapers using an increasing number of pages. The ground wood market grows tighter as the slackening in raw materials becomes more noticeable. The market is reported decidedly firm.

Chicago Paper Association Banquet

The Chicago Paper Association banquet, scheduled for November 19 at the Bismarck Hotel, is the high light of the weeks' program. Election of officers will be the chief business undertaking of the evening. Leo S. Altholz, president of the association, in giving out the ticket for the election of officers, assured the writer that the following were almost certain to be elected. Accordingly, it seems safe to announce that the following will guide the Chicago Paper Association destinies for the next twelve months: Leo S. Altholz, Inlander-Steindler Company, Chairman of the Board; President, D. F. Peck, Hanchett Paper Company; Vice President of the Retail Division, Walter Schulman, Levin Bros. Paper Company; Vice President of the Industrial Division, Earl Beier, Beier & Co.; Secretary and Treasurer, James S. Danehy, Schwartz Paper Company, re-elected. The former, together with William Shapland of the Fred Rentz Paper Company and J. H. Murnane of the Murnane Paper Company will serve on the Board of Directors. All of the speaking program will be "home talent" in that members of the association will be called upon for short talks. Plenty of entertainment and several presentations will also feature the annual dinner program.

Business Show Well Attended

The 1929 Chicago National Business Show, held at the Stevens Hotel, November 11 to 16 inclusive, was the most widely attended yet held and the exhibits were said to be the most interesting and practically useful of any that have yet appeared in "America's Efficiency Exposition." Seventy-seven exhibitors displayed accounting systems and equipment, adding and calculating machines, addressing machines, binders, carbon paper and rolls, card record systems, duplicating and printing machines and supplies, sales books, stock record systems, visible records and other devices calculated to speed up and improve business methods.

Included in the list of exhibitors was the Illinois Paper Company, with a display of dry stencils, and the Tallman-Robbins Company, with its loose leaf equipment for every accounting purpose.

News of the Trade

"Rags," published by the Rag Content Paper Manufacturers, makes its sixteenth appearance in Chicago advertising and printing offices. "If salesmen bought your letterheads," is the intriguing title of the first page story. Another item suggests "A Sharpshooter for Business,"—some one to concentrate on first-class mailings. Comments indicate that "Rags" is doing its share in increasing the consumption of good letterheads.

The Cornstalk Products Company of Danville, Ill., will be holding "open house" for members of the Illinois Chamber of Commerce and other civic organizations late in November. The visitors will be given an opportunity to study at first hand the methods of manufacturing paper from cornstalks.

Plenty of good will greetings are being extended to M. J. McNulty, chairman of the board of the McNulty Paper and Twine Company, who, because of illness, was forced to spend his seventy-third birthday on November 14, at home. Mr. McNulty, despite his advanced years, is very active in the business of the McNulty Paper and Twine Company. His many friends are congratulating him on his birthday and hoping to see him back in active service in the near future.

Jim Coy, of the Flambeau Paper Company, returns to Chicago November 18, after a two weeks' vacation spent motoring to and from Florida. It's a good bet that the Coy golf clubs accompanied Jim and his wife to the winter resort territory.

H. W. Guettler, president of the Fibre Making Process Company, Inc., Chicago, returned last week from a four and a half months' tour of Europe. The Chicago paper executive combined business and pleasure in visiting France, Norway, Sweden, Germany, Italy, Finland and Russia. Three barking drums were sold by Mr. Guettler during his trip, making a total of 23 drums disposed of by the Fibre Making Process Company within a comparatively short interval of time. While in Europe Mr. Guettler organized a company to be known as Barking Drum A/B with headquarters at Stockholm, Sweden. The company will handle all of the foreign business of the Fibre Making Process Company. Inc., and will also represent other American manufacturers of machinery and products selling in Europe. The managing director of Barking Drum A/B is Rolfe Wilen. Mr. Wilen has had many years of experience in the paper business. He spent two years in Canada and a considerable length of time in Finland in charge of pulp mills in the latter country. For the past two years the managing director of Barking Drum A/B has been actively engaged in selling barking drums in foreign territory.

Canadian Paper Mill Directory

The 1930 edition of the National Directory of Pulp and Paper Mills and Allied Trades has just been issued by the National Business Publications of Gardenvale, Quebec.

The book is mainly devoted to information regarding the pulp and paper mills of Canada. The locations, railroad or steamship connections, officers, personnel, equipment, sources of power, production, etc., of all the mills in the Dominion are carefully given. In addition, the directory also contains Mills Listed by Products, Selling Organizations, Converters of Paper and Pulp, Paper Merchants, Producers of Paper Products, Pulpwood Merchants and Contractors, Who's Who in the Industry, Rags and Paper Stock Dealers, Printers, Publishers and Bookbinders, Pulp and Paper Distributors, etc.

The directory furnishes such a complete outline of the pulp and paper mills of Canada, together with many helpful statistics as well as comprehensive lists of the allied trades, that it cannot fail to be very useful to persons requiring information of this kind.

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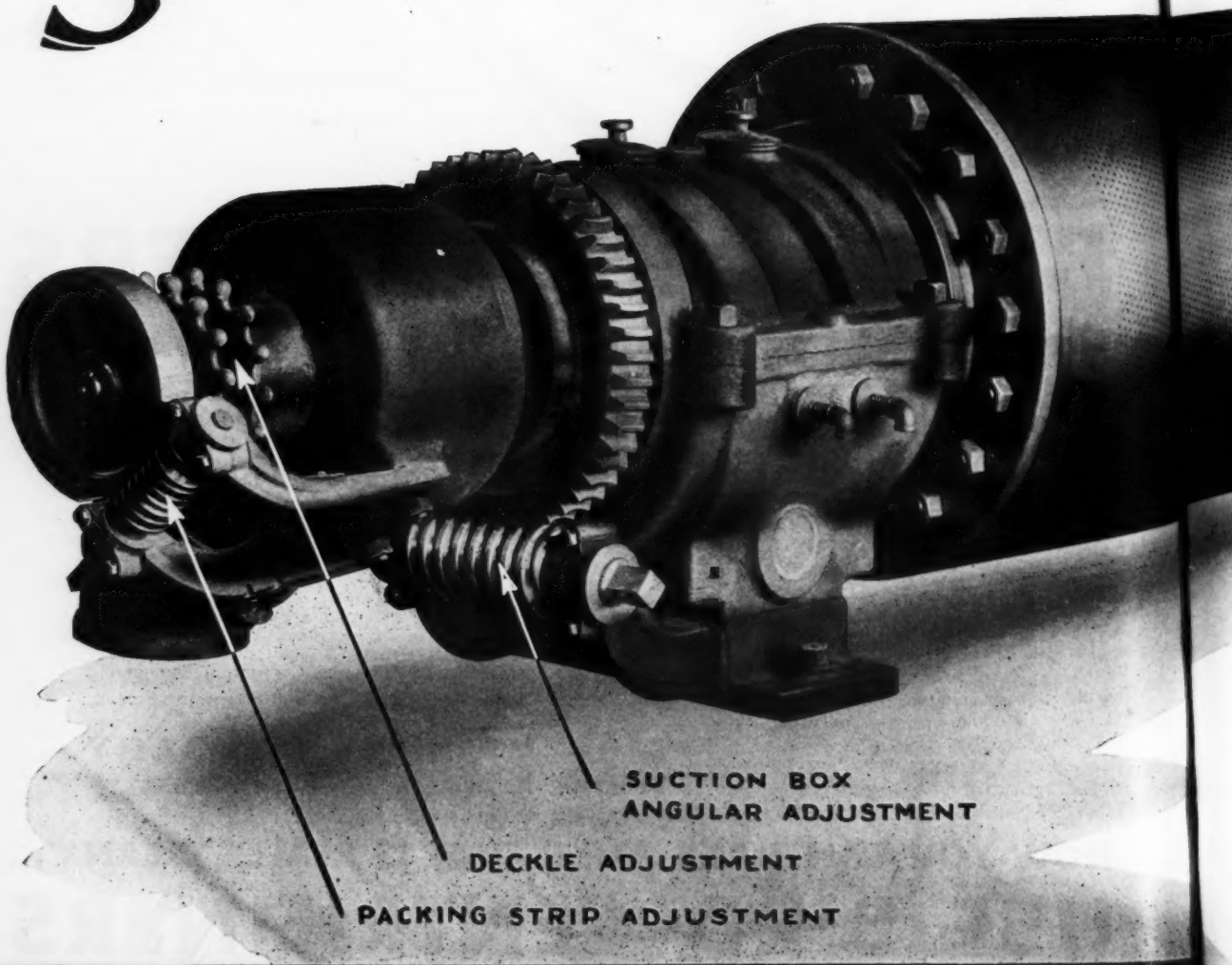
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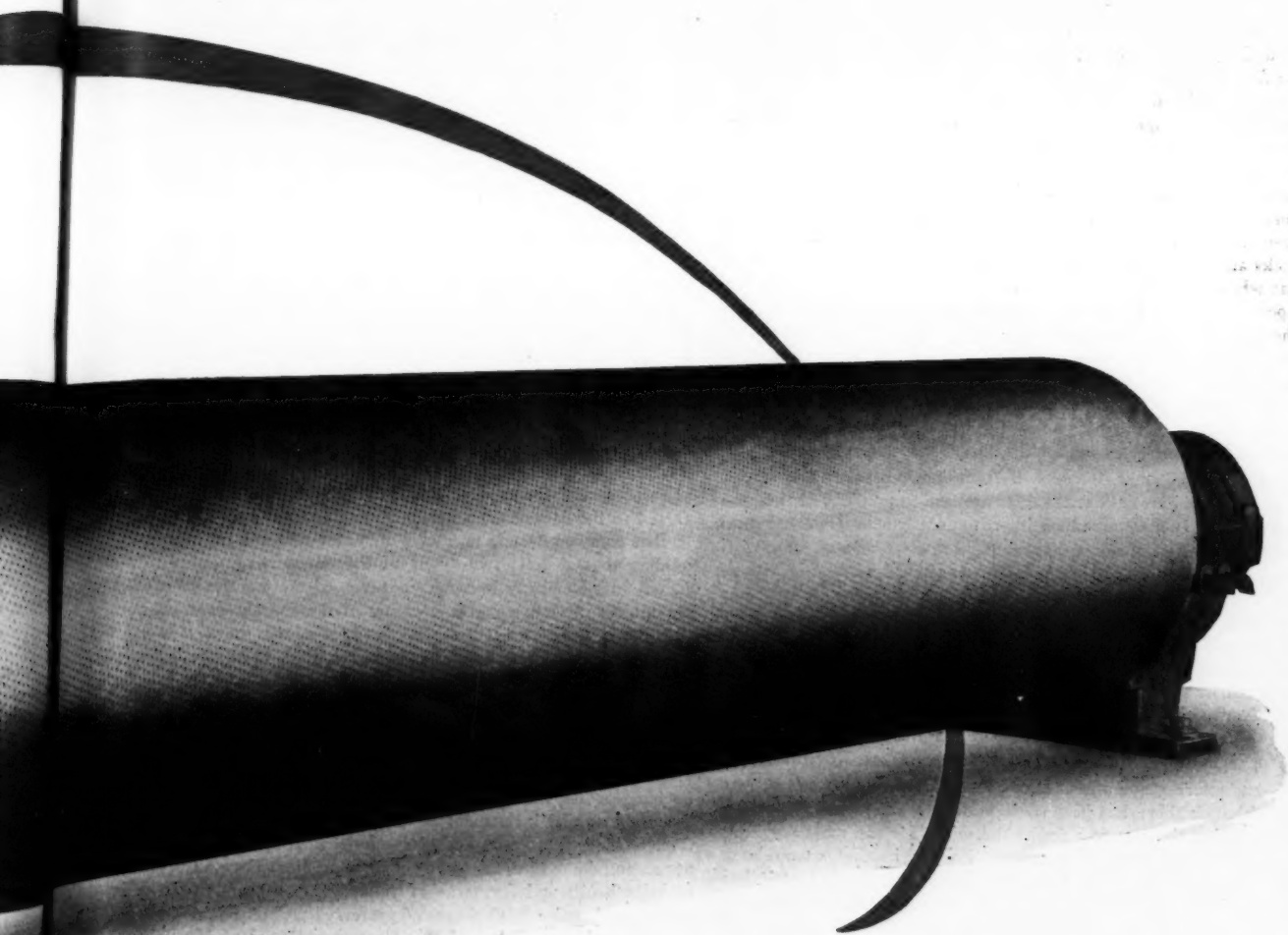

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DOWNINGTOWN MANUFACTURING CO.
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Ontario Paper Mill Operations Fairly Steady

Despite Slight Falling Off In Fine Paper Demand, Most Manufacturing Plants Are Running Near to Capacity—Book Paper Mills Still Booked Ahead With Orders, Although Leeway Has Been Reduced Lately—Writing, Ledger, and Bond Plants Quite Busy

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., November 18, 1929.—While there is a fair degree of activity in pulp and paper manufacturing circles in Ontario, the fact remains that there has been a noticeable slowing down of business in the wholesale branch of the trade. A few paper distributors report good business but the bulk of them have felt the effects of the recent series of stock market debacles which has been responsible for the dislocation of business generally in Ontario and throughout the Dominion. Not a few of the paper houses have seen paper profits dwindle to an alarming extent where surplus funds have been invested in securities of well-known stocks and their clients have been similarly affected with the result that wholesalers are not in a mood to put in stocks of paper and paper consumers are loath to make any commitments of size. The general experience of the paper distributors is that orders are not at all easy to get, although most of them are doing fairly well in the line of small lots. The printing trade has been an exception to the general rule and with the possible exception of one or two of the larger lithographing firms the consumption of paper in the industry has fallen off materially this month.

Just how long this slowness of trade in wholesale paper circles is going to continue the trade does not like to predict but the general opinion is that not much improvement can be expected until the stock market steadies down and normal conditions in investment circles return. Most paper houses should now be in a position to announce the prospect of a good Christmas trade but none are doing it beyond expressing the possibility of a pick-up in trade by the end of the present month. In the meantime paper distributors are striving to break down the psychological effect the stock markets have created by energetic sales campaigns with the aid of advertising and intensive efforts by paper salesmen. The feeling prevails that the last month of the present year will afford the opportunity of making up the sales losses of November.

Manufacturing operations have been carried on at a steady rate and although there has been a slight falling off in fine paper demand during the last few weeks the mills, for the most part, are operating fairly close to capacity. Earlier in the season book mills reported orders ahead for several months. This leeway has been gradually reduced without additional new business coming in to any extent so that while there is some business booked ahead it is not of the magnitude it was when the fall opened. Writing, ledger and bond manufacturers are fairly busy and are meeting with quite a good demand for their product. Although not so busy as they were a few weeks ago, the coating mills report a gradual betterment in conditions and the product is now in fair demand. Catalogs and a lot of direct mail advertising are now under way and although the volume is less than it was at this time last year it is furnishing a fair amount of business to the fine paper mills. Firms manufacturing grease proof, glassine, waxing and similar lines report a slowing down of business during the past week or two with a reduction in sales volume.

The coarse paper market has slightly improved and a good fall and Christmas trade is looked for in kraft, wrapping and paper bag lines. The light weight paper market continues strong and has been but slightly affected by the slowing down of the paper trade. There is a strong demand for tissue, toilet and specialty lines such as towels, napkins and decorative tissue, and mills making them are operating close to capacity. The board mills are well employed and have a satisfactory volume of business in hand. Despite additional tonnages being turned out by machines installed during the past year or so the product is being readily absorbed and the board branch of the paper industry may be described as fairly prosperous. This condition, to a large extent, reflects the state of the paper box industry which is in good shape generally, with most of the plants operating close to capacity on both standard and Christmas lines. From present indications there will be a good volume of trade for the paper box industry this Christmas although some of the manufacturers are predicting it will not reach the proportions recorded for last year's fall and winter season.

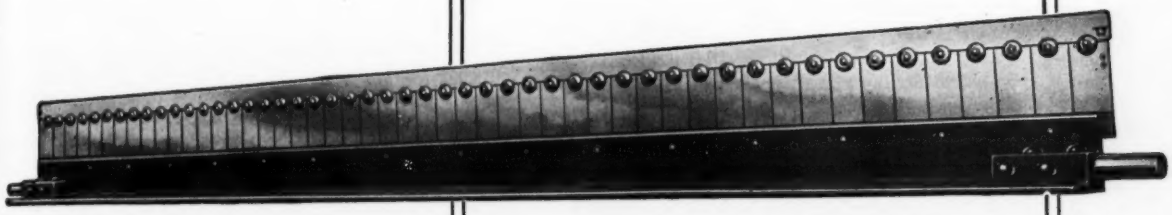
Conditions in the paper converting trade are not as satisfactory as firms would like to see but there has been some improvement in a few lines. The demand for envelopes, for instance, is light, and the call for blank books and manufactured stationery lines is not what it should be at this season. However, the trade is hoping for a return to better conditions before the winter season sets in.

Burt Co. May Drop Sales Books and Forms

The directors of the F. N. Burt Company have unanimously recommended to their shareholders that assent should be given to an arrangement which has been effected whereby the Canadian sales book and forms department of the company shall be transferred to the Moore Corporation in exchange for a stock interest in that company. It is necessary in order to make the agreement binding that at least two-thirds of the outstanding shares in the F. N. Burt Company be voted in favor of the transaction. With this object in view a special meeting of the shareholders has been called for December 11, at the head office of the company in Toronto, for the purpose of considering, and, if approved, sanctioning and confirming the agreement.

The Moore Corporation is an Ontario company owing over 99 per cent of the shares of the American Sales Book Company, the Pacific-Burt Company, and the Gilman-Fanfold Company. The proposal, if accepted, means that the F. N. Burt Company will exchange a department which is extraneous to its main business for a substantial investment in the shares of the Moore Corporation. Under the terms of the agreement, Moore Corporation agrees to take over the department of F. N. Burt Company relating to sales books and forms as of January 1, 1930, and to issue in exchange therefor 2,259 shares of preferred "A" stock, 1,284 shares of preferred "B" stock, and 19,265 common shares of Moore Corporation. The number of shares proposed to be issued to F. N. Burt Company has been arrived at on the basis of earnings in the same proportion as in the case of the acquisition by Moore Corporation of the shares of the American Sales Book Company, the Gilman-Fanfold Corporation and the Pacific-Burt Company.

S. J. Moore, of Toronto, president of the F. N. Burt Company, says that he and his directors believe that the arrangement is distinctly in the best interests of all concerned and should be accepted for four principal reasons. These are: 1—The sales book and form business of the company is restricted to Canada and constitutes approximately fifteen per cent of the company's total business. The transfer of this department would permit concentration on the company's chief business, namely, paper boxes; 2—The Canadian sales book and form business will develop more naturally and more rapidly if linked up with Moore Corporation, whose business is exclusively in these lines and will extend over the entire continent; 3—The ownership of the F. N. Burt Company, Ltd., of a substantial interest in Moore Corporation, Ltd., should be more profitable and insure greater stability of earnings than the continued operation of this department as an independent



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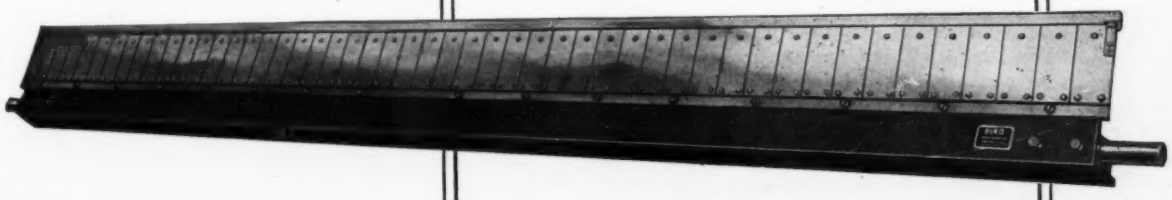


BIRD MACHINERY

3494

unit; 4—The company will secure shares with a present market value of approximately $1,000,000, which is considerably in excess of the book value of the assets proposed to be transferred.

Dryden Plans Bigger Kraft Output

Though no definite announcement has been made, it is understood that Dryden Paper Company, with mills at Dryden, Ont., is still contemplating plans for increasing its output of kraft paper. At present the company produces 15 tons of kraft sheathing paper, 35 tons of kraft manila wrapping and 75 tons of air dried kraft pulp daily. It is proposed to add another kraft machine. Dryden Paper has had a long and interesting career. For some time it was in the hands of a receiver but last year a reorganization was effected, bonds issued, and the company taken out of the receiver's hands. It would have been possible to have dissolved the receivership some time before, but interests in control of the company decided that it would be to the advantage of the company to continue the receivership until it was possible to carry into effect the reorganization plans. It is stated that the output of the company this year is better than last year under the five-year contract production for the Bates Valve Bag Company, which uses 12,000 tons of kraft produced by Dryden. Dryden Paper itself has been active in developing a market for its products. Though it has not entered the eastern market it has developed some splendid outlets in the Prairie Provinces. Bags, kraft wrapping paper, and other products are sold largely to the western departmental stores and other large users of these products.

Forest Wealth Is Disappearing

There is a real danger of Canada's pulp and timber supply becoming exhausted within a comparatively short time at the present rate of consumption combined with fire destruction and the inroads of forest pests unless more comprehensive reforestation measures are adopted. This is the considered opinion of E. Newton White, an authority on the subject, who has joined forces with Frank J. D. Barnjum in warning the Governments of the Dominion of the folly of allowing the present situation to continue. In discussing forest fires Mr. White says: "The annual fire loss more than accounts for accretion by growth as it is, and now it is appearing that another big drain is going on, in itself taking toll of more than all the forests grow. Whether or not the cause is the unhealthy conditions in our cut-over lands, the presence of millions of acres of slash and dead and dying trees, or just one of the mysteries of nature, we are now in the middle of a great outbreak of forest pests—beetles, worms, caterpillars, looper and fungi."

Dealing with reforestation, Mr. White says that at the present rate of cutting 200,000 acres of land should be planted annually for all time to maintain it. The present program calls for the planting of only 10,000 acres of forest land. He sums up the need of vigorous reforestation in the following language: "The selection of at least 200,000 acres of suitable land each year; good spruce land, remember, not rock or sand or muskeg, or agricultural land. The planting of about 300,000,000 trees. The carrying charges on that area for fifty years, the earliest possible maturity. The selection of fifty such areas—ten million acres and never mind how many trees. Fifty years of continuous expenditure in planting and protection. Think of this when next you hear of a planting project or program to perpetuate the pulpwood supply."

Good Publicity for Paper House

The firm of Buntin, Gillies & Co., Hamilton, Ont., wholesale paper and stationery dealers, recently received considerable publicity at the expense of the Canadian Pacific Hotel system as the result of a visit to Victoria, B. C., by a representative of the firm. The C. P. R. had just completed a new wing to the Empress Hotel at Victoria and extensive renovations to the existing building. Among the new features are a row of combination sample rooms and bedrooms for commercial travelers, and of those the hotel management is very proud. George E. Feene, of the Buntin, Gillies Company, was the first traveler to use one of these rooms. The management waited until Mr. Feene had his display well set out and then sent the camera man along. In due course the photograph reached the C. P. R. publicity department. Mats were made and sent out to newspapers on the company's mailing list. In this way the photo was published in a large number of papers, and the caption gave publicity to Mr. Feene, his firm and the new sample stock rooms.

Notes and Jottings of the Trade

The Ontario Paper Company, Ltd., Thorold, Ont., is conducting a "popular girl" contest in Thorold and district, the winner to be chosen to christen the new motorship *Thorold*, which is being specially constructed for the Ontario Paper Company by Earle's Shipbuilding and Engineering Company, Hull, England. The ship will have a capacity of 3,000 tons of paper and will be the third of the company's ships on the Great Lakes.

About twenty-five members of the Toronto Carton Council left this week on a good-will trip to Boston and New York where they were entertained by various paper box organizations and where they visited a number of the large carton manufacturing concerns in the two cities.

At a meeting of the Technical Service Council in Toronto this week the election of S. R. Parsons to the chairmanship, in succession to the late Sir Edward Kemp, was confirmed. Many of the large Canadian pulp and paper companies are contributors to the organization which is designed to supply Canadian industrial concerns with University-trained help. A program for the annual meeting to be held at the York Club in Toronto was outlined and at that meeting a statement of the operations of the Council during the year will be presented. A. P. Costigane, secretary-engineer of the Ontario Paper Makers' Safety Association, was present at the meeting as representing the Canadian pulp and paper industry.

Ned Smith, managing director of the Howard Smith Paper Mills, Ltd., and family, are sojourning at Virginia Beach where Mr. Smith is recuperating after an illness.

John Dolphin, of the Sealright Company, Inc., Fulton, N. Y., who sold the first carload of Sealright containers in Canada—which containers are now manufactured by the company's affiliated concern at Peterboro, Ont., was a business visitor in Toronto recently.

Arthur Hobson, Toronto manager for the Howard Smith Paper Mills, Ltd., was the host the other evening to a number of the members of his old battery with which he served overseas.

Alexander Renshaw, chief millwright of the Interlake Tissue Mills, Ltd., at Thorold, Ont., is recovering from an injury he sustained while at work in the plant and which occasioned his removal to the hospital.

The Canadian Government Trade Commissioned at Hong Kong reports that several import houses have approached him with reference to the possibility of establishing connection with Canadian paper manufacturers. The chief requests are for news print and kraft paper, but bonds, writings and waxed paper have also been mentioned. Some representative samples of the papers in demand are on file at the Department of Trade and Commerce, Ottawa, and may be seen by any manufacturer interested.

Contracts have been let and work is progressing on a $50,000 residence being erected by H. H. Love, president of the W. J. Gage Company, Ltd., paper dealers and manufacturing stationers, Toronto.

Puget Sound Orders Pulp Drying Machines

The Puget Sound Pulp and Timber Company has ordered from Paper Machinery, Ltd., Montreal, Que., two large K. M. W. pulp drying machines for bleached pulp. These machines will be the first of their kind to be installed on the Pacific Coast. The machines are of a new design and include several new features, such as patented rotary suction boxes, special high pressure felt presses, Sylwan's positive condense water systems, etc., all of which make it possible to handle the stock and the pulp in the most perfect and economical manner for producing the highest quality of pulp.

57 WARREN PUMPS 42

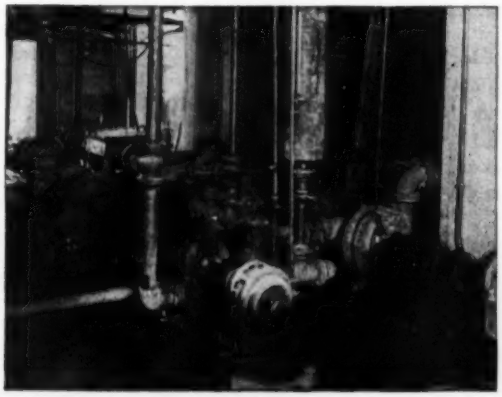
Installed at Southern Advance Bag and Paper Company, Hodge, La.

Installed at Gulf States Paper Corp., Tuscaloosa, Alabama

THE increasing number of new mills completely equipped with Warren Pumps is proof of the economical operation, low maintenance cost, and dependable performance of these pumps in actual service.

Designed and built to give the lowest possible pumping cost per year, Warren Pumps contain many improvements not found in other pumps. Liberal clearances protect case rings from wear and maintain the pumps' original efficiencies for a long period of time; shafts are extra large at impeller and bearings, preventing vibration and deflection; tongue and groove construction is used on all interior parts (including bearings) eliminating bolts or pins liable to work loose and cause trouble.

Many other advantages are described in Bulletins covering Centrifugal and Reciprocating types for every service. Write for copies.



Battery of six Warren 4" and 5" liquor and clear water pumps at Southern Advance Bag and Paper Co.

Warren

Steam Pump Company Inc. — **Warren Massachusetts**

Warren Engineering Corp., 117 Liberty Street, New York City
M. L. Katzenstein, President

Western Engineering Company, 215 Market Street, San Francisco, Cal.

3300

Connecticut Valley Superintendents Meet

HOLYOKE, Mass., November 16, 1929.—This city, known as the "Queen City" of the Connecticut Valley and famous throughout the world as a leading paper making center, played host to the members of the Connecticut Valley Division of the American Pulp and Paper Mill Superintendents' Association and their guests, who came from all over New England and other sections, to attend the seventh annual meeting of this division. There was nothing lacking in either business sessions or entertainment to leave any one in doubt as to their journey having been well rewarded by the constructive value of the discusions and papers read during the business meeting and the hospitality for which New Englanders are noted.

Over one hundred had registered at the time of the opening of the business session which was called to order by John J. White, chairman, who after brief remarks on the growth of the Connecticut Valley Division turned the meeting over to John P. Kennedy of the American Writing Paper Company.

"Brevity and Action" it soon became evident were to be the watchwords of the meeting as Mr. Kennedy informed those present that only one address was to be made and the remainder of the session would be devoted to giving of solutions of questions propounded by members relative to manufacturing problems with which they had been confronted.

President James P. Ramsey, of the National Association of Pulp and Paper Mill Superintendents, the first to address the gathering, referred to the national association as being the greatest industrial organization of an industry and that it had done more for the pulp and paper industries than it had been given credit for. He paid a well deserved tribute to John O'Connell as one of the founders of the national association and as the moving spirit who was largely instrumental in organizing the Connecticut Valley Division. On behalf of the association he presented Mr. O'Connell with a past president's medal. In acknowledging the gift ex-President O'Connell briefly reviewed the history of the association and complimented the members on the rapid growth of the Connecticut division.

L. C. Reynolds Is Speaker

L. C. Reynolds, controller and assistant to the president of the American Writing Paper Company, Inc., the speaker of the meeting, introducing his subject, "Control in Management," stated the "Law of Economics is a stern thing," one not readily understood or appreciated by those whose interests are devoted largely to production. His talk which held the closest attention, is reprinted in the Cost Section of this issue.

At the close, Mr. Reynolds answered a barrage of questions, most of which referred to the question of standardization of raw materials, equipment, etc., and while he seemingly was of the conviction that manufacturing problems in the pulp and paper industries were not very dissimilar to those of the metal industries, it was apparent from the sentiment expressed by his interrogators that standardization of furnish or equipment could not be successfully accomplished unless the mill product was exclusively of one grade and one quality. Even then it was conceded that the quality would possibly vary because of the changing human element due to the tour system of employment.

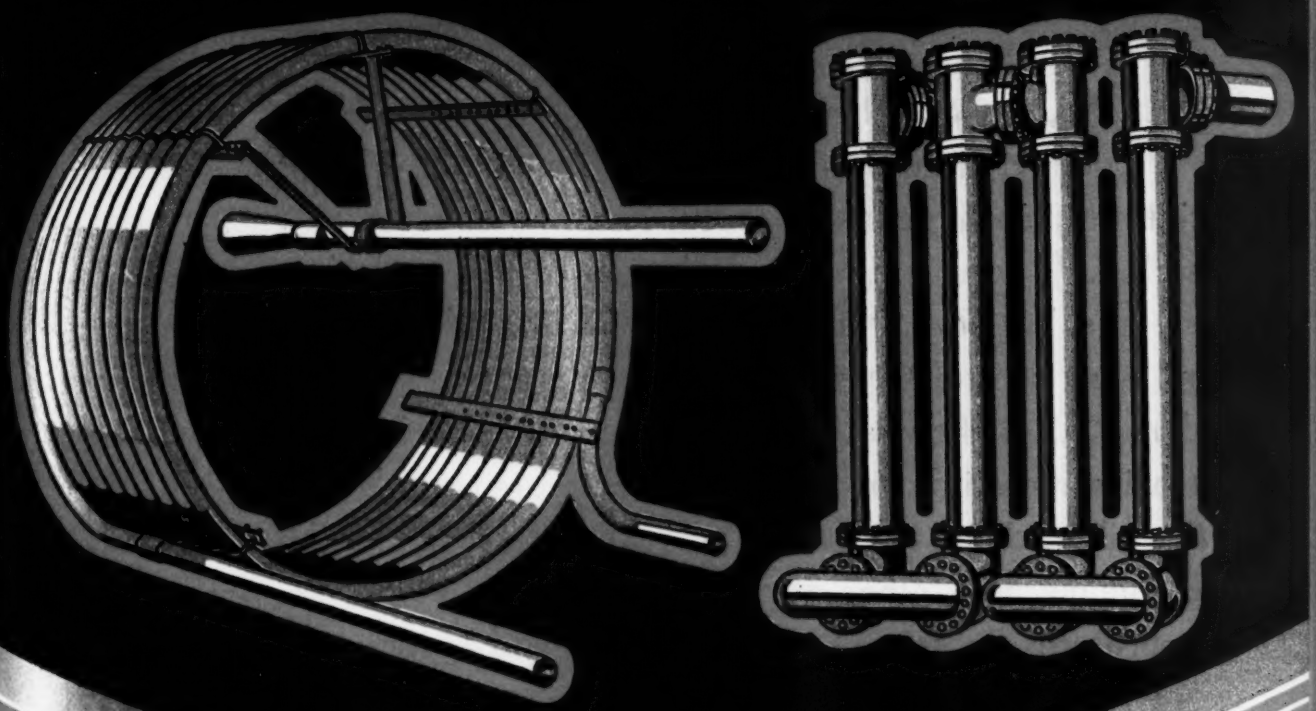
The meeting closed with a banquet in the evening, at which formal speeches were tabooed.

During dinner, selections were rendered by the Collins Trio, daughters of Henry Collins of the American Writing Paper Company, Crocker Division, also vocal selections by Louis Provost, also of the Crocker Division and vocal selections by James P. Ramsay. Music for dancing was by the "Marionettes" of Holyoke.

Among Those Present

Among those registered and in attendance at the business session were the following:

P. W. Myers, Mountain Paper Company, Lee, Mass.; Joseph Bario, Taylor Logan Paper Company, Holyoke, Mass.; A. T. Barnett, American Writing Paper Company, Holyoke, Mass.; F. L. Barstow, U. S. Rubber Company, Fitchburg, Mass.; John H. Browne, Chemical Paper Company, Holyoke, Mass.; Ernest W. Bush, Chemical Paper Company, Holyoke, Mass.; Geo. T. Carroll, American Writing Paper Company, Holyoke, Mass.; Alex Cassie, American Writing Paper Company, Holyoke, Mass.; Chas. Champion, Millers Falls Paper Company, Millers Falls, Mass.; Wm. B. Clements, Clements-White Trading Company, Holyoke, Mass.; Wm. Dalrymple, American Writing Paper Company, Holyoke, Mass.; A. B. C. Drew, Pairpoint Corporation, New Bedford, Mass.; Richard F. Driscoll, Smith Paper Company, Lee, Mass.; Thomas F. Dillon, American Writing Paper Company, Holyoke, Mass.; George Teren, American Writing Paper Company, Holyoke, Mass.; Earl C. Esty, American Writing Paper Company, Holyoke, Mass.; L. F. Frisbie, Westfield River Paper Company, Russell, Mass.; R. V. O'Brien, Westfield River Paper Company, Russell, Mass.; James M. Geraghty, American Writing Paper Company, Holyoke, Mass.; E. H. Gibbons, Smith Paper Company, Lee, Mass.; M. V. Horgan, American Writing Paper Company, Holyoke, Mass.; John P. Kennedy, American Writing Paper Company, Holyoke, Mass.; C. N. Mooney, Smith Paper Company, Lee, Mass.; Roger McCorkindale, Parsons Paper Company, Holyoke, Mass.; W. L. Nixon, American Writing Paper Company, Holyoke, Mass.; J. H. O'Connell, Case Manufacturing Company, Unionville, Conn.; Geo. W. Reardon, American Writing Paper Company, Holyoke, Mass.; Daniel H. Schwartz, Chemical Paper Company, Holyoke, Mass.; Claude H. Smith, American Writing Paper Company, Holyoke, Mass.; C. A. Tifft, Geo. W. Wheelwright Company, Wheelwright, Mass.; S. E. Weiser, National Folding Box Company, New Haven, Conn.; John J. White, Clements-White Trading Company, Holyoke, Mass.; John J. White, Jr., Hornblower & Weeks, New York; L. M. Yoerg, American Writing Paper Company, Holyoke, Mass.; S. L. Willson, American Writing Paper Company, Holyoke, Mass.; S. G. Stapley, Chemical Paper Company, Holyoke, Mass.; Edward J. McDonnell, Groveton Paper Company, Groveton, N. H.; Paul McDonnell, Groveton Paper Company, Groveton, N. H.; Leonard F. Taylor, American Writing Paper Company, Holyoke, Mass.; A. C. Caldwell, Knox Woolen Company, New York; A. J. Tatnell, Wm. E. Hooper & Sons Company, Philadelphia, Pa.; T. J. Keenan, Paper Industry, New York; James A. Ramsay, Jessup & Moore Paper Company, Wilmington, Del.; Henry Escott, Holyoke, Mass.; Arthur H. Wyman, Munroe Paper Corporation, Lawrence, Mass.; John F. Carroll, Leominster, Mass.; John R. Sinclair, Buchanan Bolt Company, Holyoke, Mass.; Roy McCorkindale, Chase & Cooledge Company, Holyoke, Mass.; Geo. L. Smith, The Republic Rubber Company, Albany, N. Y.; T. H. Ireland, Crane Company, New York; F. H. Knowlton, A. E. Staley Company, Boston, Mass.; James Stewart, Chemical Paper Company, Holyoke, Mass.; A. A. Tanyane, PAPER TRADE JOURNAL, New York; L. D. Post, Paper Mill & Wood Pulp News, New York; John J. O'Brien, Paper Mill & Wood Pulp News, Boston, Mass.; Frank C. Farnsworth, Farnsworth Company, Conshohocken, Pa.; D. K. Bartlett, American Writing Paper Company, Windsor Locks, Conn.; John McGrath, Case Manufacturing Company, Unionville, Conn.; Geo. Docherty, Holyoke Wire Cloth Company, Holyoke, Mass.; C. A. Sitzer, Eaton-Dikeman Company, Lee, Mass.; Geo. A. Thompson, Whiting Paper Company, Holyoke, Mass.; A. C. Loomis, Heller & Mertz Company, Springfield, Mass.; Geo. Walker, Worthy Paper Company, Springfield, Mass.; P. S. Sinclair, The Sinclair Company, Holyoke, Mass.; R. R. Farwell, DuPont Company, Wilmington, Del.; A. J. Brunelle, B. K. Tremaine and S. L. Miles, Holyoke, Mass.; Norman B. Scott, Orr Felt and Blanket Company, Springfield, Mass.



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DUE TO THE KRUPP patented method of processing, Enduro KA2 meets all requirements for installations subject to excessive corrosion, or where high temperatures are combined with corrosive attack. ¶ The distinctive characteristics of this improved chrome-nickel-iron alloy gives piping, tubes, wire, tanks, digesters, kettles, storage vessels, condensers, and countless other apparatus fabricated from this material, a life many times that of ordinary steel or other alloys. ¶ The high immunity of Enduro KA2 to corrosive attack—its unusual strength at high temperatures—freedom from embrittlement—and high resistance to oxidation, are effecting substantial economies in industry. ¶ To overcome costly losses now occurring where other metals are used, alert designers now specify Enduro KA2. It is available in all usual shapes and forms.

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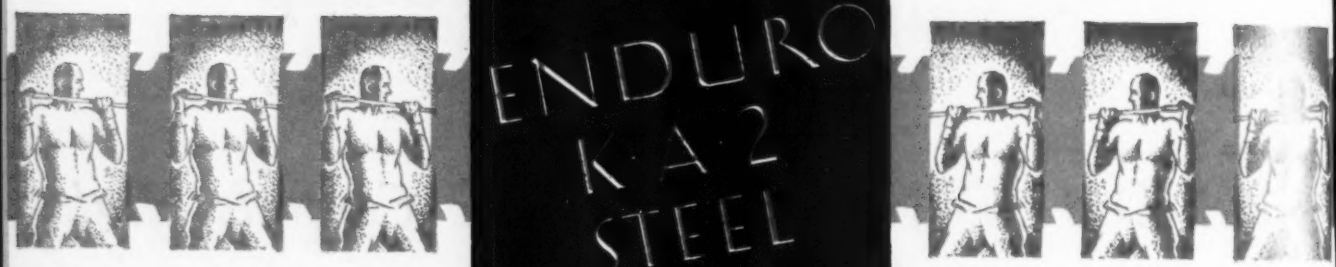

The booklet tells the history of Enduro—fully explains its many advantages and points out scores of its manifold uses. Write to any of the companies listed below for your copy.

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85 Liberty St., New York City, N. Y.

Gatineau Power Co. Begins Delivery

The Gatineau Power Company, controlled by the International Hydro-Electric System, a division of the International Paper and Power Company, has begun delivery of an additional 20,000 horsepower of electric energy to the Hydro-Electric Power Commission of Ontario. This quantity of power, originally scheduled for delivery on October 1 of next year, increases to 182,000 horsepower the total now being delivered by Gatineau Power Company to the Commission. Of this, 150,000 horsepower is being sent over a 220,000 volt transmission line 230 miles long, and is being distributed by the Commission in the Toronto area to supplement the power from Niagara Falls.

The present deliveries of 182,000 horsepower to the Commission reflect an increase of 76,000 horsepower over the amount being delivered by Gatineau Power Company a year ago. The rapidly increasing demand for electric energy on the Commission's system caused it to start anticipation of the deliveries scheduled for October 1 of this year as early as August 21. By the middle of September all of the power scheduled for delivery on October 1 had already been taken and an additional 20,000 horsepower was needed to meet the still increasing demand.

The three contracts under which this power is being delivered include one of the largest power contracts ever signed. This contract runs for thirty years from October 1, 1928, and calls for annually increasing quantities of power until October 1, 1931, when the fixed maximum demand will be 260,000 horsepower, which rate continues throughout the life of the contract.

Under the second contract which the Gatineau Power Company has with the Hydro-Electric Power Commission of Ontario, an additional 100,000 horsepower is reserved for the Commission, which agrees to take at least 60,000 horsepower. This power is to be taken in minimum annual increments of 6,000 horsepower for ten years beginning October 1, 1928. The Commission will take the balance of the 100,000 horsepower during the ten years as far as needed.

The electric energy called for by the first contract is being delivered by the Paugan hydro-electric plant of the Gatineau Power Company on the Gatineau River, thirty-five miles north of the City of Ottawa. Designed for 272,000 horsepower, of which 204,000 horsepower is installed and in operation, the Paugan plant is one of three which the Company has on the Gatineau River with an aggregate installed capacity of 436,000 horsepower.

With the operation of the three developments combined into a single system, the Gatineau Power Company is utilizing to the best advantage the total fall in the Gatineau River for a distance of sixty-two miles from its mouth and is developing about two-thirds of the available head on the whole river. All the remaining head which can be developed economically is controlled by the company.

Box Board Production for September

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 18, 1929.—September production of box board, based on reports to the Department of Commerce by 97 firms operating 124 plants (reports for earlier months including five concerns now out of business) was 83.8 per cent of capacity, as compared with 82.9 per cent in August and 85.2 per cent in September, 1928. In the following table the capacity data vary according to the normal number of working days in each month:

Year and Month	Operation			Production			New orders	Unfilled orders, end of month
	Capacity	Operated	Per cent of capacity	Capacity	Output	Per cent of capacity		
	Inch hours			Short tons			Short tons	
1928								
January	10,372,900	7,833,458	75.5	273,125	203,882	74.6	204,128	80,417
February	10,372,900	8,136,737	78.4	273,125	211,862	77.6	215,333	85,862
March	11,312,244	8,843,542	78.2	297,108	227,344	76.5	244,871	93,380
April	10,474,300	8,311,710	79.4	275,100	221,079	80.4	211,304	84,513
May	10,893,272	8,733,965	80.2	286,104	242,394	84.7	224,366	73,157
June	10,893,272	8,199,515	75.3	286,104	228,646	79.9	228,252	77,782
July	10,474,300	7,992,170	76.3	275,100	201,153	73.1	209,976	79,492
August	11,312,244	9,236,068	81.6	297,108	230,750	77.7	236,682	81,816
September	10,055,328	8,344,464	83.0	264,096	224,971	85.2	234,449	87,097
Total (9 mos.)	96,160,760	75,631,629	87.8	2,526,970	1,992,081	78.8	2,009,361	.....
1929								
January	11,417,328	9,297,029	81.4	307,268	248,290	80.8	241,086	87,974
February	10,539,072	8,435,967	80.0	283,632	228,034	80.4	227,595	87,726
March	11,417,328	9,416,990	82.5	307,268	256,118	83.4	266,895	96,209
April	11,417,328	9,278,701	81.3	307,268	251,147	81.7	250,366	98,162
May	11,417,328	9,526,063	83.4	307,268	264,830	86.2	240,395	89,485
June	10,978,200	9,170,955	83.5	295,450	241,028	81.6	231,230	81,880
July	11,417,328	9,045,362	79.2	307,268	236,377	76.9	240,617	88,275
August	11,856,456	*9,589,606	80.9	319,086	*264,365	82.9	*257,318	*82,969
September	10,539,072	8,526,033	80.9	283,632	237,759	83.8	246,801	87,304
Total (9 mos.)	100,999,440	82,286,706	81.4	2,718,140	2,227,948	82.0	2,202,303	.....

Year and Month	Shipments of box board	Stocks of boxboard end of month	Consumption of waste paper			Stocks of wastepaper	
			Capacity	Consumed	Per cent of capacity	At plants	In transit and unshipped purchases
	Short tons					Short tons	
1928							
January	196,984	49,032	255,225	189,744	74.3	153,747	62,181
February	209,477	50,350	255,225	193,966	76.0	140,104	60,038
March	237,621	40,439	276,966	209,649	75.7	139,255	47,322
April	220,315	40,319	256,450	211,898	82.6	132,621	47,551
May	235,794	49,107	266,708	220,750	82.8	127,217	46,375
June	223,901	53,560	266,708	204,468	76.7	130,484	43,480
July	203,741	49,969	256,450	190,810	74.4	132,265	62,056
August	233,104	47,709	276,966	213,626	77.1	117,009	48,108
September	228,880	45,271	246,192	217,361	88.3	116,197	53,344
Total (9 mos.)	1,989,817	.....	2,356,890	1,852,272	78.6	.....	.....
1929							
January	247,498	56,804	297,440	238,652	80.2	137,251	49,104
February	227,206	57,398	274,560	217,442	79.2	126,212	54,121
March	258,604	54,982	297,440	242,073	81.4	137,008	51,520
April	247,773	57,881	297,440	231,089	77.7	142,666	68,005
May	260,283	62,311	297,440	248,813	83.7	150,048	54,433
June	235,865	62,384	286,000	234,119	81.9	159,005	56,904
July	235,863	63,333	297,778	215,537	72.4	175,306	64,359
August	*262,889	*61,853	309,231	*256,560	83.0	*171,360	*61,571
September	242,421	58,664	274,560	230,146	83.8	174,526	89,280
Total (9 mos.)	2,218,402	.....	2,631,889	2,114,431	80.3	.....	.....

* Revised.

Cost Association Elects New President

Ralph B. Hersey, in charge of the Cost Department of Hollingsworth & Vose Company of Boston, Mass., has been elected President of the Cost Association of the Paper Industry for 1930.

Mr. Hersey is a New Englander having been born in Dorchester, Mass., and educated in Boston, where he graduated from the Boston High School of Commerce in June, 1915. In February, 1916, he was employed by Robert W. Lennox, treasurer of the Hollingsworth & Vose Company. He became head of the Cost Department in 1920 and since then the cost system in operation at the East Walpole and West Groton Mills of the Hollingsworth & Vose Company, has been materially changed and improved.

In accepting the presidency Mr. Hersey stated he did so in the hope that he would receive the fullest co-operation and help from

RALPH B. HERSEY

all members of the Cost Association, and that he hoped the association would be successful in bringing about a greater degree of uniformity, in the accounting procedure in use in the different groups in the pulp and paper industry.

Mr. Hersey is an enthusiastic believer in the value of the educational work the Cost Association is doing in the industry and for many years has been a regular attendant at all cost conventions, always being accompanied by at least one of his assistants.

Fargo Paper Co. To Build

FARGO, N. D., November 16, 1929.—Construction of foundations and footings for a $50,000 warehouse and office building for the Fargo Paper company will be started immediately. Announcement that the company would build was made by Robert E. Cole, president of the concern.

The structure will be located between the Park, Grant and Morris building and the International Harvester building on the west side of Eighth st., N., between N. P. ave. and First ave. Plans and specifications for the building have not been completed, Mr. Cole said, but the structure probably will be three stories high, 135 by 50 feet in dimensions, on Northern Pacific trackage.

Construction of the building proper will not be started until early in the spring. Mr. Cole said. The basement and foundations will be completed this fall to make it possible to start work as soon as weather permits next year.

Contract for excavation has been let to the McCormick Transfer company and this concern will begin the work when it has completed excavation for the new Fargo postoffice.

Construction of the new building, Mr. Cole said, has become necessary because of a large increase in the company's business with resulting need for additional floor space. The building will have approximately 31,000 square feet of floor space. A built-in garage will be constructed at the rear to house the company's trucks.

Among the features of the new quarters will be a conveyor system which will be used in transferring stock from one floor to another by means of special chutes. An elevator of 5,000 pounds capacity and automatic scales also will be installed.

Sample rooms, where the firm's stocks of paper goods will be displayed, will be arranged on the ground floor.

Loading and unloading of material will be accomplished by means of an alley which will run along the north side of the building. The interior of the structure will be well lighted, with windows along the front and two sides.

The Fargo Paper company was established in 1918 and at that time only two salesmen were employed and the entire territory consisted only of a portion of eastern North Dakota and adjacent cities. Now the firm employs a force of seven salesmen with a staff of several persons in the office. The territory has been increased from time to time until now it covers all of North Dakota, eastern Montana, western Minnesota and a part of South Dakota.

E. De Vries Visits in America

E. De Vries was an interesting visitor to the office of the PAPER TRADE JOUURNAL last week. Mr. De Vries is manager of N. V. De Hollandsche Papier Industrie E. De Vries & Co., with main offices at De Ruyterkade 96/97, Amsterdam, Holland. This concern does an export business in all lines of paper, varying from three cents per pound to fifty cents per pound. In addition to the main office at Amsterdam, the house has branch offices in Brussels, Belgium; Colombo, Ceylon; Rangoon, Burma; Singapore and Penang, The Straits; Weltevreden and Soerabaya, Java. Heavy stocks of paper are carried in all of these branches with the exception of Colombo.

Mr. De Vries is making a brief visit to some of the representative paper centers of America to study conditions in the paper industry here and also to arrange for some new lines of paper for export. He states that American papers enjoy a wonderful prestige throughout the world which is due in considerable measure, at least, he believes, to the excellent manner in which samples are put out.

His house carries in stock over eight hundred varieties of paper and over one thousand varieties of cover paper, which, it is believed, is the largest stock of such papers carried by any house in the world.

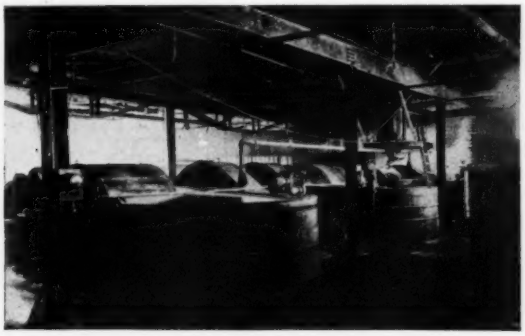
He has been in the paper business 27 years. He started his career when only 13 years old at a wage of 10 cents per week. He has traveled in practically every part of the world and as he is aged but 40 years now, is, naturally, qualified in every particular to continue the expansion of the big business organization which he has already built.

Just previous to his trip to America, he spent some time in British India, where he established several branches. Early this week he visited the paper mills in the Holyoke section. Mr. De Vries will be pleased to receive samples of paper at his main office in Amsterdam from concerns who are interested in establishing an export business.

Harry E. Lindquist Resigns

Harry E. Lindquist, for the past three years vice-president and sales manager of the Missisquoi Pulp and Paper Company, of Sheldon Springs, Vt., resigned his position on November 1. Mr. Lindquist is not as yet definitely decided as to his future connections and for the present his friends in the trade may reach him at his present address, Albee court, Larchmont, N. Y.

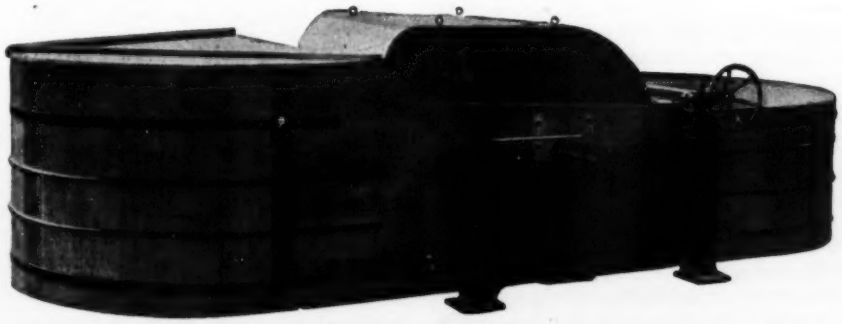
An Emerson High Density, High Speed Beater in the mill of a nationally known maker of bonds and cover stock. Built to handle 1800 lbs., a 2300 lb. load was running in the beater when the picture was taken.



3 old style beaters, each handling 1200 lbs. at 3% density, took 180 H.P. 3 Emerson High Density, High Speed Beaters shown above, each handling 1850 lbs. of the same stock at 7% density, use 170 H. P., *effect a 50% power saving over the old beater room.*

Let Emerson modernize your beater room

Emerson engineering and beater design have kept abreast of papermaking . . . High density, high speed beaters reduce beating time, save power, handle heavy loads without trouble . . . Emerson beaters built to meet *specific* mill requirements lower beater room costs, maintain quality and uniformity, give steady, dependable service . . . New mills are completely equipping their beater rooms with modern Emerson beaters, others are installing them to replace obsolete equipment, bringing their plants up to date. . . . Ask us to show what they can do for you.



10 low cost Emerson High Density, High Speed Beaters, similar to the one above, are operating in a mill making high grade papers. Name on request.

The Emerson Manufacturing Company

Lawrence • • • Massachusetts

Division of John W. Bolton & Sons, Inc.

3477

Obituary

O. S. Egan

WISCONSIN RAPIDS, Wis., November 18, 1929.—O. S. Egan, for the past 16 years prominent in paper making circles, died at his home in Wisconsin Rapids, Wis., October 23 from a heart attack following a stroke of paralysis with which he was taken two weeks before his death.

On August 15 he was appointed Technical Advisor for the Consolidated Pulp and Paper Company at Wisconsin Rapids, having supervision of the technical work of four mills, Wisconsin Rapids, Biron, Stevens Point, and Appleton.

Omar Smith Egan was born in Burdette, N. Y., August 18, 1886. He graduated from Watkins (N. Y.) High School in 1907 and received his degree of Chemical Engineer from the College of Engineering of Syracuse University in 1913.

From 1913 to 1918 he was employed as assistant general superintendent in charge of all technical work by the Crocker McElwain Chemical and Paper Company at Holyoke, Mass. In 1918 he came to Wisconsin to organize a technical department for the Thilmany Pulp and Paper Company at Kaukauna. He remained there as head of the department until 1923 when he came to Port Edwards as technical superintendent for Nekoosa-Edwards Paper Company. He remained in the employ of Nekoosa-Edwards until August 1, 1924.

He was intensely interested in paper and contributed much to the industry. While in Port Edwards he patented the Egan Hand-Sheet Mould and Press which is sold by the Appleton Machine Company.

He was a member of the local Kiwanis, Masonic Lodge, the Alpha Chi Sigma, honorary Chemical Fraternity, and the Technical Association of the Pulp and Paper Industry. He was also a member of the Port Edwards M. E. Community Church.

In 1910 he was married to Grace Charles of Odessa, N. Y. Besides his wife, he leaves four young children: Jean, Donald, Barbara and Gorden; one brother, Earl, of Watkins Glen, N. Y.; his mother, Mrs. Charles Egan of Elmira, N. Y., and numerous relatives in and near Watkins Glen.

Interment was made at the Laurel Hill Cemetery, Odessa, N. Y.

To Hold Commercial Forestry Conference

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 18, 1929.—Under the auspices of the Chamber of Commerce of the United States and leaders of the forest and associated industries, a Commercial Forestry Conference will be held December 4 and 5, at Charleston, W. Va. The two-day session will hear 30 speakers, with intervals for general discussion. In a broad way the following topics outline the program: The Forest Situation in West Virginia. The Value of Forests to West Virginia Interests. Handling and Growing of Forests. Wise Use of Forest Resources and Wood Products. Protecting Forests from Fire. The Forest Taxation Problem.

The meeting is the first of its kind to be held in West Virginia, and is intended to call together the individuals whose welfare is associated with maintenance of the forest. Representatives of lumber activities, pulp and paper interests, coal operators, the State, owners will devote the two days to a discussion of the possibilities of growing timber as a private commercial enterprise and means manufacturers, railroad, sporting associations, farmers, and resort of overcoming obstacles to the practice.

Arrangements for the Conference are being perfected under the direction of Col. W. M. Wiley, of Sharples, and the Hon. John Raine, of Rainelle. The general committee will decide on final details at a meeting in mid-November.

In speaking of the place private enterprise occupies in producing forest resources, the Hon. John Raine, prominent lumberman and member of the State Legislature, says:

"There are three mediums for reforestation: Federal, state and individual. At present, four-fifths of our forests are privately owned and it is not expected that public acquisition of forest lands will increase very rapidly, so that it has been well said that our national timber budget cannot be balanced without private forestry. We will then have to dismiss largely the government as a potent factor in the forest industries and figure on making the problem one of commercial attractiveness. Our consumption of forest products is nearly half that of the entire world. This discloses the importance of this industry."

Canadian Pulp and Paper Exports Decrease

Canadian exports of pulp and paper in September were valued at $145,618,067, according to the report issued by the Canadian Pulp and Paper Association. This was a decrease of $1,864,698 from the August total and of $803,753 from the total for September, 1928.

Wood pulp exports for the month were valued at $3,468,405 and exports of paper at $12,116,124, as compared with $3,568,494 and $11,191,228 respectively in September, 1928.

Exports of various grades of pulp and paper for September, 1929 and 1928, were as follows:

	September, 1929		September, 1928	
PULP:	Tons	$	Tons	$
Mechanical	23,944	675,370	15,475	403,158
Sulphite bleached	37,314	1,397,913	21,865	1,652,506
Sulphite unbleached	16,369	794,207	14,972	750,214
Sulphate	9,476	538,965	12,034	709,068
Screenings	3,263	61,950	2,874	53,548
	90,366	3,468,405	67,220	3,568,494
PAPER:				
News print	201,249	11,689,638	170,840	10,752,406
Wrapping	919	103,450	1,175	128,587
Book (cwts.)	5,651	51,184	6,918	59,796
Writing (cwts.)	44	701	2	97
All other	.....	271,151	.....	250,342
	.....	12,116,124	.....	11,191,228

For the first nine months of the current year the total value of pulp and paper exported from Canada amounted to $145,618,067 as compared with a total of $139,549,440 for the corresponding nine months of 1928, an increase for this year of $6,068,627.

Details for the nine months' period are as follows:

	Nine Months, 1929		Nine Months, 1928	
PULP:	Tons	$	Tons	$
Mechanical	152,382	4,200,488	137,236	3,730,754
Sulphite bleached	211,095	14,581,008	188,200	14,242,220
Sulphite unbleached	143,221	7,070,560	157,620	7,923,915
Sulphate	101,729	5,998,522	119,578	7,066,900
Screenings	27,268	487,671	22,864	459,544
	635,695	32,338,249	625,498	33,423,333
PAPER:				
News print	1,828,880	108,763,941	1,583,010	101,695,383
Wrapping	11,121	1,208,620	11,888	1,302,136
Book (cwts.)	55,975	478,351	50,421	418,752
Writing (cwts.)	3,850	35,010	3,469	32,085
All other	.....	2,793,896	.....	2,677,751
	.....	113,279,818	.....	106,126,107

Total exports of pulpwood for nine months amounted to 1,081,701 cords valued at $11,009,255 as compared with 1,285,127 cords valued at $12,649,787 in the same period of 1928.

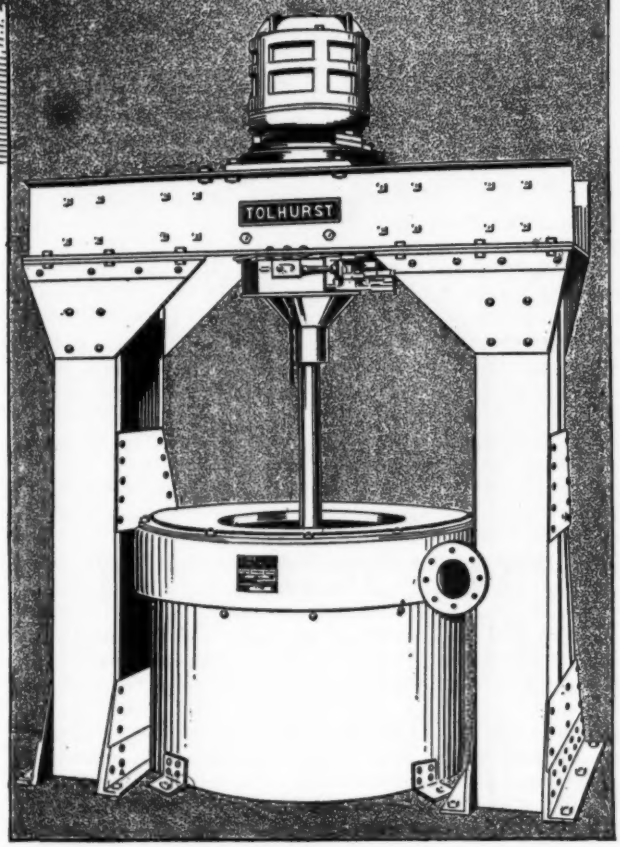
Wisconsin Conservation Program

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 18, 1929.—Greater care in tree cutting, and increased efforts to prevent fires are outstanding features of the program set forth for the coming year by the Wisconsin Conservation Commission in its efforts to conserve the pulp wood and timber supply of the state. Additional nurseries will be provided for the growing of trees until they are ready to be transplanted on forest areas. Dangerous fire hazards are to be removed everywhere, and close supervision will take place with respect to all cutting. When timber is to be cut under the new severance tax law, all contracts will be approved by the commission first.

Federal and state controlled first areas have increased greatly in acreage this year. The present program will bring about an entirely different aspect in the forest situation within a few years, due to the favorable legislation now existing in the State of Wisconsin.

CLEAN PAPER



CAN YOU AFFORD TO OFFER NEARLY CLEAN PAPER WHEN OTHER MILLS ARE MAKING PERFECTLY CLEAN PAPER ?

DESIGNED AND BUILT BY SPECIALISTS

This machine is made under license of the Centrifugal Engineering and Patents Corporation, holders of the Erkensator Patents.

WITH the Tolhurst, all foreign matter is eliminated, whether it be a heavy substance such as metal or grit, or light matter such as cork or rubber, etc. The Tolhurst removes it quickly and positively and delivers nothing but thoroughly clean stuff to the wire.

Stuff prepared in the Tolhurst forms a stronger, more uniform sheet because of the brushing-out action which takes place within the machine. The Tolhurst, built by Centrifugal specialists, is the answer to the papermaker whose problem has been one involving clean paper.

Bulletin, describing the machine in detail and outlining its many advantages, will be sent on request.

TOLHURST MACHINE WORKS, INC.
TROY, N. Y.

New York Office: 30 Church St. **Chicago Office: 8 So. Dearborn St.**

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Chicago, Ill.—The National Card and Mat Board Company, 4318 Carroll avenue, has awarded a general contract to Patterson & Hartrich, 140 South Dearborn street, for a one-story addition, 50x100 feet, reported to cost close to $20,000, with equipment. Work will be placed under way at once. Lewis E. Russell, 140 South Dearborn street, is architect.

Kimberly, Wis.—The Kimberly-Clark Company, 128 North Commercial street, Neenah, Wis., is said to be arranging an early call for bids for an addition to mill at Kimberly, consisting of a one-story unit, 122x127 feet, to be used for a finishing department, with section reserved for storage and distribution service. It is reported to cost in excess of $100,000, with equipment. The O'Keefe-Orbison Engineering and Construction Company, 201 East College avenue, Appleton, Wis., is engineer.

Millis, Mass.—The Safepack Mills, Inc., manufacturer of waterproof wrapping and building papers, has begun the erection of a new unit at its plant, consisting of one-story building, 150x250 feet, to be used for storage and distributing service. Another railroad siding is being built to the mill for use with new structure. The work is scheduled for completion early in the coming year.

Piedmont, W. Va.—The West Virginia Pulp and Paper Company, 230 Park avenue, New York, is carrying out an improvement and development program for water purification at its mill at Piedmont. A new purifying plant is being installed with capacity of 10 to 20 million gallons per day, to be used for clean sterilized water supply for the pulp and paper mill, including chemical treatment, aeration, settling and filtration sections. The new plant is estimated to cost about $200,000. The company is also enlarging and improving its mill waste reduction plant, to include the installation of evaporators, burners, filters, rotaries and auxiliary equipment. Contract for considerable equipment has been awarded. This part of the program is expected to represent an investment of close to $225,000, with machinery. The installation is being carried out by company construction forces. Morton C. Tuttle Company, 31 St. James avenue, Boston, Mass., is engineer and contractor for different features of the expansion program.

Montville, Conn.—The Robert Gair Company, 420 Lexington avenue, New York, manufacturer of corrugated paper and fiber boxes and containers, is said to be planning rebuilding of storage and distributing plant unit at Montvile mill, recently damaged by fire with loss of about $25,000, including building and stock.

New York, N. Y.—Wilchik & Kline, Inc., manufacturer of paper boxes and containers, has leased the ground floor, basement and sub-basement in building at 190-92 Greene street, and plans to establish plant at that location. It is understood that equipment will be installed at once.

Menasha, Wis.—The Marathon Paper Company Mills Company, Rothschild, Wis., is awarding miscellaneous contracts for the completion of new plant unit now under way at Menasha, including roofing and sheet metal work to the Northern Corrugating Company, Green Bay, Wis. General award was recently made to the Worden-Allen Company, Port Washington Road, Milwaukee, Wis. The new structure is reported to cost in excess of $60,000, with equipment.

Houston, Tex.—The Houston Paper Company, 814 Commerce street, has awarded a general contract to J. B. Townsend, Post-Dispatch Building, for a one-story building at Franklin and Commerce streets, to be uesd for storage and distributing service, reported to cost about $75,000, with equipment. Joseph Finger, Democratic Building, is architect. Michael Maltz is vice-president of the company.

Freehold, N. J.—The Pull-Box Company, Inc., care of William Hartshorne, 1 West Main street, Freehold, recently formed by Mr. Hartshorne and associates with capital of $100,000, is said to be planning operation of a local plant for the manufacture of folding paper boxes and other paper containers. Edward Evanson and Kenneth A. Baird are also interested in new company.

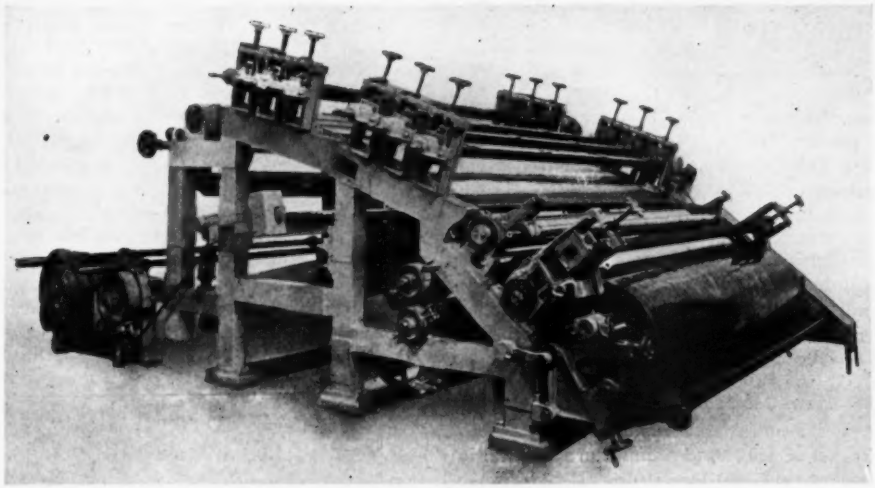
Bucksport, Me.—Officials of the Central Maine Paper Company, Augusta, Me., an interest of the Middle West Utilities Company, 72 West Adams street, Chicago, Ill., are said to be planning the construction of a paper mill in the vicinity of Bucksport, where hydro-electric power supply from company project at the new Bingham dam, will be available in the future. The proposed plant will be given over to the production of news print, it is reported, and will be equipped for an initial output of about 250 tons per day. It is reported to cost more than $1,000,000, with equipment. It is understood that a subsidiary organization will be formed to carry out the development.

Summerville, S. C.—The Cooper River Timber Company, a subsidiary of the West Virginia Pulp and Paper Company, 230 Park avenue, has concluded negotiations for the purchase of a tract of timber properties in the vicinity of Summerville, totaling about 60,000 acres, in all, heretofore held by the J. F. Prettyman & Sons Company. Property will be held by the new owner for future development. No announcement has as yet been made regarding contemplated work.

Springfield, Mass.—The Fiberloid Corporation, Worcester street, has awarded a general contract to the Adams & Ruxton Construction Company, Springfield, for a one-story addition to its fiber products plant, estimated to cost about $25,000, with equipment. It will be used primarily for office and kindred service.

Neenah, Wis.—The Bergstrom Paper Company, 225 West Wisconsin avenue, will begin the construction of two new extensions to plant, to be used for office and affiliated purposes. General contract has been let to the Benjamin B. Ganther Company, State street, Oshkosh, Wis. Auler, Jensen & Brown, Oshkosh, are architects.

Otsego, Mich.—The Otsego Waxed Paper Company, recently organized by local interests with a capital of $100,000, is said to be planning the early operation of a mill in this section for the manufacture of waxed and other processed papers. Charles E. Nelson, president and general manager of the Mac Sim Bar Paper Company, with local mill, is one of the principal incorporators of



Features Of This
ARCHED BACK COATING MACHINE

Handles goods up to 110 inches and wider without slack edge and wrinkling troubles.

All main drives assembled in ball bearings with dirt and oil proof housings. Minimum friction load.

Rubber apron is driven on suction end of coater through a roller chain drive enabling slack side of apron to side guide.

Extra heavy proportioned frames prevent possibility of undue stress running wide goods or vibration from high speeds.

Coating head driven by wide rubber apron which eliminates slippage and prevents variation in amount of coating per ream.

Uniform tension rig provides surface tension roll that automatically takes care of tension regardless of size of the roll of paper.

Complete specifications and construction details sent on request.

John Waldron Corporation

Main Office and Works: **NEW BRUNSWICK, N. J.**

NEW YORK
122 East 42nd St.

208 W. Washington St.
CHICAGO

PORTLAND, ORE.
519 American Bank Bldg.

WALDRON
Paper Converting Machinery

the new company, and it is understood will be president of the concern. Other incorporators are Lewis W. Dickinson and Marvin A. Hart, both of Otsego.

Pittsburgh, Pa.—The four-story building at Thirteenth street and Liberty avenue, formerly occupied by the F. J. Kress Box Company, manufacturer of corrugated paper boxes and containers, was damaged severely by fire, November 9, with loss reported at close to $50,000. No announcement has been made as yet regarding rebuilding.

Stockholm, Sweden—In connection with its expansion program accompanying increase in capital, recently noted in these columns, the Kreuger & Toll Company, Stockholm, has concluded negotiations for purchase of Wil Elektriska Aktiebolag, which owns and operates a hydro-electric power generating plant at Wiiforsen, Ljungan, Sweden, and undeveloped water power in that district. The present station has a capacity of 65,000 hp., while future installations will develop about 185,000 hp. additional. The purchasing company will transfer the power interest to the Swedish Cellulose Company, recently formed as a subsidiary, which will use the power at its wood pulp mills in the northern part of the country.

New Companies

Dallas, Tex.—The Verhalen Paper Company, Inc., has been incorporated with a capital of $50,000, to manufacture and deal in paper goods. Walter Verhalen, 3600 Drexel drive, Dallas, is the principal incorporator and will head the company.

Green Bay, Wis.—The Northern Paper Mills, Inc., has arranged for an increase in capital, providing for an issue of second preferred stock totaling $500,000. Other capitalization will remain as heretofore with $130,000 first preferred, and 75,000 shares of common stock, no par value.

Wilmington, Del.—The General Fibre and Manufacturing Company, care of the Corporation Service Company, Equitable Building, Wilmington, has been incorporated under state laws with a capital of 1,000 shares of stock, no par value, to manufacture fiber, pulp and paper products.

New York, N. Y.—The Haut Envelope and Paper Company has been incorporated with a capital of $5,000, to manufacture and deal in commercial paper goods. Sidney Wedeen, 253 Broadway, attorney, will represent the company.

Owensboro, Ky.—The Owensboro Loose Leaf Company has been incorporated with a capital of $30,000, to manufacture and deal in loose-leaf paper goods for commercial service. The incorporators are G. W. Robinson and H. L. Wilson.

International Electric Energy Output Gains

International Paper and Power Company system produced 383,347,000 kilowatt hours of electric energy in September, an increase of 41 per cent over the output of the system in September, 1928. In the first nine months of this year the output of the company was 3,421,183,000 kilowatt hours, 40 per cent greater than in the corresponding period of last year.

Included in the output figures are those of International Hydro-Electric System—controlling New England Power Association and Canadian Hydro-Electric Corporation, Ltd.—and of the hydro-electric plants of the International Paper Company group.

Subsidiaries of International Paper and Power Company are not only showing substantial gains in electric energy output, but are increasing their productions at a faster rate than the productions of the countries in which they are operating.

While the output of electric energy of all utility power plants in the United States in the first nine months of this year increased 11.5 per cent over the corresponding period of last year, and the output of New England not included in the New England Power Association area increased 13.5 per cent, the plants of New England Power Association increased their output by 14.9 per cent.

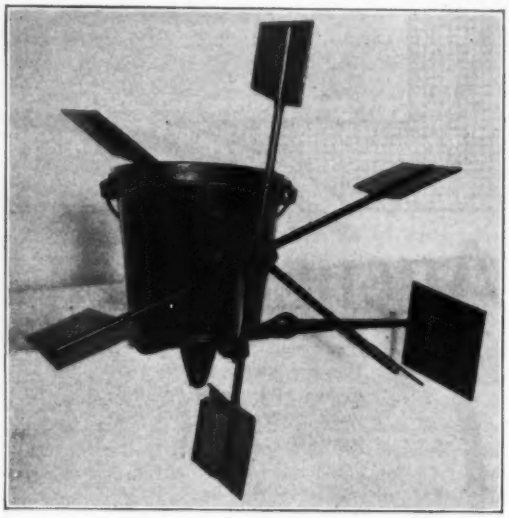
In Canada, the output of the plants of Canadian Hydro-Electric Corporation, Ltd., increased 67 per cent in the first nine months, compared with an increase of 11 per cent for all central station hydro-electric plants in the Dominion. The plants of Gatineau Power Company increased their output by 63 per cent, compared with 15 per cent for all central station hydro-electric plants in the Province of Quebec.

New Type of White Water Sampling Machine

A large number of technical men have wanted a simple and versatile sampling machine for checking up on white water losses from each paper machine, the pulp mill, save-alls, and many other places. The DeZurik Shower Company, of Sartell, Minn., has had the good fortune to experiment on this work in a certain mill for several years past and during this period a large number of ideas were tried and found wanting in some respect. This experience brought the following results:

It was found that in order to give best results the white water should be kept in constant agitation otherwise precipitation takes place especially in water from filled papers, and a high test results. Space for a sampler is often cramped and inaccessible.

Combining these experiences a machine was designed along the following lines:



A paddle wheel to be rotated by the moving water and with one paddle having built up sides and an adjustable lip to form a sort of trough, was mounted on a sliding brass post to allow adjustment for spouts and liquids of various depths. This paddle wheel is of aluminum to permit rotation in slowly flowing streams. The sliding post holding the wheel fits into a brass stand which fastens to the side of the spout where samples are to be taken. This stand also holds the pail into which samples are deposited by the machine. A brass cross arm which can be lowered into the moving stream is mounted directly in front of the rotating wheel. This serves as a speed controller and agitator, a boiling action taking place behind it and mixing the water thoroughly before the sample is taken.

In operation the paddle wheel turns at from 4 to 8 r.p.m., the trough shaped paddle gathering a considerable sample at each revolution. As the wheel revolves most of this sample falls back into the spout and the desired amount, which can be controlled over a wide range, by the adjustable lip, is deposited into the pail. In this way a large number of small, but very representative samples, because of continuous agitation, will fill a 10 quart pail in from 8 to 24 hours as desired.

The simplicity and accuracy of this machine together with all brass and aluminum construction, adjustability, light weight, and compactness make it particularly adapted for special laboratory tests as well as permanent control work over a wide range of installations.

6 Good Reasons for Investigating the VALLEY-VOITH SCREW PRESS

1. LOW INITIAL COST.
2. LOW LABOR COST.
3. ELIMINATES WIRE, FELTS AND AUXILIARY EQUIPMENT.
4. GREATER CAPACITY.
5. SMALL AMOUNT OF POWER.
6. LESS SPACE.

OTHER VALLEY EQUIPMENT

Jordan Engines
Beaters, Breakers, Bleachers & Washers
Flat and Rotary Screens
Screw Presses
Voith High Pressure Stock Inlets
Centrifugal and Stuff Pumps
Laboratory Equipment
Stock Valves—Gate and Plug
Stock Consistency Regulator
Special Machinery

The above advantages—together with the fact that *11 successful installations are already in operation*—are important reasons why you should have us send you complete information regarding the new Valley-Voith Screw Press—a machine that removes liquids from pulp and replaces wet machines, deckers and filters.

Address your inquiry to the Valley Iron Works Co., Appleton, Wisconsin.

VALLEY

Equipment for Paper and Pulp Mills

New York Office: 350 Madison Ave.

Western Manufacturing & Sales Division: Smith & Valley Iron Works Co., Portland, Oregon
Canadian Representatives: Pulp & Paper Mill Accessories Ltd., Montreal, Canada.

New York Trade Jottings

Dr. E. O. Merchant, Economist of the Meade Paper and Pulp Company has returned from the Harvard Economic Conference held at the Hotel Statler in Boston.

* * *

Douglas Crocker, secretary of the Salesmen's Division of the American Paper and Pulp Association, has just returned from a business trip to Washington, D. C.

* * *

At the weekly meeting of the New York Division of the Salesmen's Association plans for future meetings were discussed. The meeting next week will be held in the private dining room at the Fraternities Clubs Building, at 22 East 38th street, New York. The speaker will be Charles H. Barr, of Charles H. Barr Associates. The talk will be on the subject of reaching the ultimate consumer and thus increasing the "paper consciousness" of the general public. Mr. Barr intends to do this by the publication of a periodical called "Double Dollars." The following week the speaker will be G. A. Renard, secretary of the National Association of Purchasing Agents, who will give the purchasing agent's point of view on distribution problems.

* * *

The confirmation of Mortimer W. Byers to be judge for the Eastern District of New York was favorably reported to the Senate by its Judiciary Committee last week. Mr. Byers, for a long number of year past, has been the secretary of the Stationers' Association of New York and the secretary of the National Association of Stationers, Office Outfitters and Manufacturers. He was associated for a long number of years in the practice of law with William Ridgway, the late secretary of the National Paper Trade Association and for a time generously assisted in carrying on the work of the secretary's office after the death of Mr. Ridgway. Many paper men, therefore, with whom Mr Byers became acquainted will view with friendly interest the confirmation of his appointment to the Federal judgeship by President Hoover and will wish him much continued success in his high office.

Power Co. to Consummate Deal

FULTON, N. Y., November 18, 1929.—The Niagara-Hudson Power Corporation has virtually completed negotiations for taking over the Fulton Light and Power Company and it is understood that the deal will be consummated this week. It is also believed that other deals are pending as the Fulton Light and Power Company owns the Granby, Volney and Eureka Paper Mills which were bought from the Arrowhead Mills at the time the firm sold its Battle Island plant to the Armstrong Cork Company. Directors of the Niagara-Hudson organization are holding a meeting this week to approve the purchase and it is said the deal involves no cash payments but only an exchange of stock.

The Fulton Light and Power Company is owned by Warner & Whiting, of Willimantic, Conn., and Ray W. Porter is general manager. The local utility company has been in the hands of the Warner family for a quarter of a century and supplied power for manufacturing purposes to paper mills and other industries in this section. The pending purchase by the Carlisle interests is an important one as the local company is the only one between Albany and Canada not linked with the Carlisle-Morgan utility chain.

Western Board Products to Start Plant

SALEM, Ore., November 15, 1929.—The Western Board Products Company, which was organized some time ago in Salem, with a capital stock of $100,000, announced on November 11 that a plant would be established in Salem employing fifty persons. The output will include binder board, trunk board, friction board and allied materials.

Government Paper Bids and Awards

WASHINGTON, D. C., November 20, 1929.—The Government Printing Office has received the following bids for 41,690 pounds of high finish sulphite manila tag board; Barton, Duer & Koch Paper Company at 6.71 cents per pound; Whitaker Paper Company, 6.88 cents; R. P. Andrews Paper Company, 7.84 cents; Old Dominion Paper Company, 8.39 cents; Reese & Reese, Inc., 6.75 cents; Dobler & Mudge, 7.75 cents, and Walker Goulard Plehn Company, 7.75 cents.

The Printing Office has also received the following bids for 6,825 pounds of 24 x 38 inch, 136½ lbs., white ledger paper; Carew Manufacturing Company, 25.4 cents per pound; Barton, Duer & Koch Paper Company, 27.5 cents; Whiting Paper Company, 27.5 cents; Atlantic Paper Company, 25.85 cents; and Reese & Reese, Inc., 29.5 cents.

Barton, Duer & Koch Paper Company has been awarded the contract for furnishing the Government Printing Office with 40,000 pounds of calendered tag board in 23½ inch rolls at 7.2 and 7.84 cents.

G. H. Buhrman's Paper Company, Amsterdam, Holland, will furnish 10,000 pounds of straw board 25 x 30 inches at $200.50, plus import duty. Bids for these items were received on November 1

The Cauthorne Paper Company will furnish 45,200 pounds (600,000 sheets) of 21 x 32 inches whilte sulphite bond paper at 6.519 cents per pound, bids for which were received on October 25.

New Power Development at Waddington

[FROM OUR REGULAR CORRESPONDENT]

OGDENSBURG, N. Y., November 18, 1929.—Paper manufacturers in this section were interested in the announcement this week that the New York and Ontario Power Company has applied to the International Joint Commission for a permit to use the power resources of the St. Lawrence River at Waddington. If permission is granted a power plant costing $500,000 will be constructed and the power distributed for manufacturing purposes in this district. It is planned to develop about 50,000 horsepower.

The title to the land along the Waddington power site dates back to 1801 when possession was taken by Thomas and David Ogden. A few years later a third interest was sold to Joshua Waddington, for whom the town was named. Successors of these men held the power rights until 1905, when they were acquired by the New York and Ontario Power Company. Application for a permit to build a huge dam was pending when the war broke out and New York State then brought an action to test the title to the property. The case was carried from one court to another on appeal by the state. The appeal was finally withdrawn, leaving the matter again before the International Joint Commission for action.

Strathmore Employes Long Service Rewarded

SPRINGFIELD, Mass., November 19, 1929.—Horace A. Moses, president of the Strathmore Paper Company, of Woronoco and Mittineague, presented three employees with lapel service pins for 25 years service at the annual dinner at the Hotel Clinton Thursday.

The three thus honored are Miss Julia E. Blush, Ettore Pintelli, and Edward Crawford. Miss Blush is employed in the sample department at the Mittineague mill and Mr. Pintelli in the manufacturing department of the same mill. Mr. Crawford is employed in the finishing department of the Woronoco mills.

Package Paper Co. Expanding

HOLYOKE, Mass., November 19, 1929.—Machines of the Package Paper Company are running day and night and the concern now employs about 125 hands. The company is affiliated with the Package Machinery Company of Springfield. An option on further space has been secured as the business is growing rapidly. The concern makes all kinds of wrapping paper for gum, candy, bread and the like.

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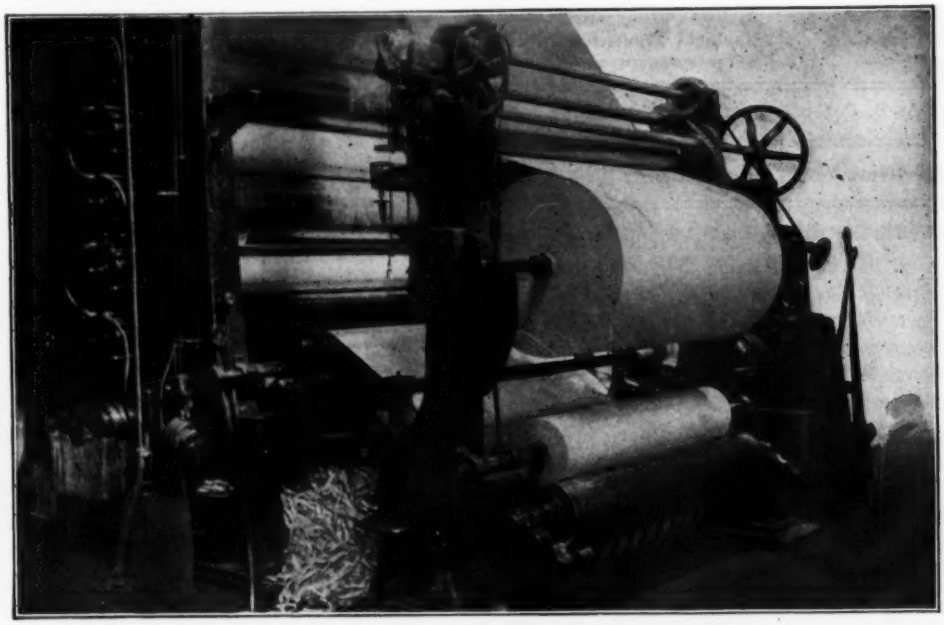

Two-Drum Type Winder (Photograph taken in one of the mills of the Kimberly-Clark Co.)

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Makes use of wide stacks desirable

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"M & W" Four-Drum Super-Calender Winders equipped with Removable Top and Bottom Slitters. "M & W" Brass Collapsible Winding Shafts are the latest improvement for High Grade Mills.

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HIGHER GROUND WOOD PRICES

The ground wood industry, according to reports, from Canada, has taken a distinct turn for the better. For the first time in over two years producers are satisfied with market conditions. During that time conditions in this branch of the pulp and paper industry have been depressed and markets limited for production. Sales were intermittent and prices ranged around $25.00 a ton, at which price there was little or no profit. Owing to drought conditions in the United States during the past month or two, large orders have been placed with ground wood pulp manufacturers in the Dominion which will ensure active operations during the balance of the winter, or at least until water conditions improve in the United States and permit the operation of grinding mills.

What is even more satisfactory is that this new business has been secured at an appreciable advance in price. At present spot prices for ground wood pulp is $30 to $32 at the mill and one ground wood manufacturer stated that his company was making more money at the price than the news print manufacturers. The price for the first quarter of the new year has yet to be settled. A decision will be arrived at about the middle of this month and unless drought conditions have been considerably ameloriated in the States, it is expected that a good price will be fixed.

Ground wood pulp manufacturers are expecting that the American demand will continue good until next spring. At present the United States, in addition to its large purchases in Canada is importing from Sweden and Norway. This is unusual, and gives an indication of the promising outlook for the producers. This change in the market for ground wood pulp has made considerable difference to Canadian mills, more especially those with surplus output to sell.

PLANS FOR CENSUS OF MANUFACTURES

American production and distribution have entered into a new era of activity. New and intensified problems have appeared on the horizon—production has become an exact science, and keener and keener competition has harassed distribution. The manufacturer and the distributor cannot depend on the old thumb-and-rule methods—they must keep fully abreast of the times through current data at all times if they are to become successful.

The Advisory Committee on Manufactures and the Census Bureau officials are keenly aware of the large value of current production and distribution data to the manufacturers and distributors of every city and town of the country. They are desirous that the benefits of this manufacturing inventory to be taken in January shall be shared by the business men of every community, so that waste in production and distribution may be eliminated and the full fruits of labor shared by all business—large and small.

Mr. John E. Palmer, has been appointed by Director Steuart of the Bureau of the Census to direct a plan of procedure which it is believed will bring the practical value of the Census of Manufactures to the close attention of every manufacturer of the country.

The community is to be the basis of approach. Community co-operation among business men is an established fact today. Obtain this co-operation for the Department of Commerce and a channel is provided for the dissimulation of information to manufacturers and distributors which is unexcelled. The directing head of such community co-operation is the local board of trade, chamber of commerce and service clubs. Therefore, the first step, in the opinion of Mr. Palmer, is to obtain the cordial co-operation of these local trade and service bodies, and to place upon them the responsibility for the dissemination of the necessary information among manufacturers and distributors. Efforts will be made to reach every community in the country through these local trade and service organizations.

The United States has been divided into 17 districts. Every community of any size in each of these districts will be card-indexed and the local trade association and service clubs within 100 miles of the above cities will be requested to send delegates representing the local manufacturers and distributors to a conference of all community representatives of the district, said conference to be held at a central city in the district. Trade association and service clubs in communities outside the 100 mile limit will be reached through correspondence. These invitations will set forth the tempo of industry and business, the absolute necessity of basic information for business success, and the large value which will ensue to the community through sending a representative to such a conference comprising representatives of every community in the district. Few communities will want to take a chance on losing out through not being represented at such a conference. It is the belief of the Committee on Information that at least 90 per cent of the communities will send representatives to such a confrence.

The first of these conferences will take place on November 22, at the Pennsylvania Hotel, New York City. This conference will be addressed by Dr. Julius Klein, Assistant Secretary of Commerce, Colonel L. S. Horner, Chairman of the Advisory Committee on Manufactures, Fred M. Feiker, Chairman of the Advisory Committee on Distribution and W. M. Steuart, Director of the Bureau of the Census. The conference will be broadcast over the Columbia National net-work. Conferences in other cities will be held as follows: November 25—Bellevue Stratford Hotel, Philadelphia; November 27—Atlanta-Biltmore Hotel, Atlanta, Georgia; November 29—Statler Hotel, Detroit, Michigan; November 30—

Hotel Statler, Buffalo, N. Y.; December 2—Hotel William Penn, Pittsburgh, Pa.; December 4—Statler Hotel, Cleveland, Ohio; December 5—La Salle Hotel, Chicago, Illinois; December 7—St. Charles Hotel, New Orleans; December 9—Jefferson Hotel, Dallas, Texas; December 11—Statler Hotel, St. Louis, Mo.; December 12—Fontenelle Hotel, Omaha, Nebraska; December 14—Brown-Palace Hotel, Denver, Colorado; December 17—Olympic Hotel, Seattle, Washington; December 19—Claremont Hotel, San Francisco; December 20—Los Angeles Biltmore, Los Angeles, Cal.; January 4—Boston Chamber of Commerce, Boston, Mass.

The community representatives will be sold to the value of the censuses to their local manufacturers and distributors, the methods other communities have used involving data on manufactures and distribution, and how these methods can be applied by manufacturers and distributors of their own community to solve the problems of construction and distribution. The fact that we stress that if proper co-operation is obtained from the local manufacturers and distributors the Census Bureau will do its part in getting back to the local community early data for the use of the manufacturers and distributors.

The representatives will be asked to return to their community and do five things; first, give the local papers a report of the district conference; second, keep the local paper informed of local and national developments of the Census work; third, organize a meeting of local manufacturers about the middle of January, which meeting will be addressed by a speaker furnished by Mr. Palmer; fourth, organize a meeting of local wholesalers and distributors about the middle of April which meeting will be addressed on the Census of Distribution and fifth, to deliver a short talk over the local radio, of which there are over 600 in the country.

Through these methods the Bureau of the Census hopes to so inform manufacturers as to the value of the Census information that the reports on production operations will be made available to the Census Bureau in Washington by the middle of February at the latest. Such an accomplishment would make it possible for the Bureau of the Census to make available to the manufacturing industry basic data within six months—a result which would render the Census of Manufactures of inestimable value to American manufacturers in the study of their production and marketing problems. In addition the Census Bureau believes that many thousands of dollars will be saved to the Government through more accurate returns, and a material decrease in the amount of special field work necessary to obtain correct reports.

Improving Fort Edward Mill

FORT EDWARD, N. Y., November 18, 1929.—Engineers are at work at the local plant of the International Paper Company completing plans calling for an expenditure of about $90,000 in the making over of Machines 2, 3 and 5 which were included in those revamped when the mill was changed from a news print to a bond mill two years ago. The plans call for every modern appliance used in the manufacture of bond paper, it is said. It is understood that the improvements will be started early in January requiring about four months for completion. The employees now working on the machines to be rebuilt will be used in the reconstruction work and consequently it is not expected that any will be laid off.

Since the local plant started making bond paper the machinery has been operated under full head with greatly increased production and improvement in the quality of the product. The big mill is now conceded to be one of the best bond mills owned by the company and has filled many important contracts, including much government paper. During the past week sixteen cars loaded with paper were shipped from the terminal here in filling a government contract and other shipments of a similar nature will follow.

Paper Production Decreases in September

According to identical mill reports to the American Paper and Pulp Association from members and co-operating organizations, paper production in September registered a decrease of 8 per cent as compared with August, 1929, and an increase of 8 per cent over September, 1928. Paper production for nine months ending September, 1929, showed an increase of 7 per cent over the same period of 1928.

All individual grades, excepting bag and wrapping papers, registered increases over last year in the month's output. Uncoated book paper production showed an increase of 20 per cent over September, 1928, and hanging increased 14 per cent, tissue 10 per cent, writing 10 per cent, paper board 8 per cent, news print 5 per cent, and belts and building 5 per cent. Production of bag paper decreased in September, 1929, as compared with September, 1928, by 6 per cent and wrapping paper 3 per cent.

Shipments of all grades in September, 1929, excepting news print, bag and wrapping papers, increased over September, 1928, the total shipments being 6 per cent above the total of last year.

All grades, excepting paper board, wrapping, bag, tissue and hanging papers, registered increases in inventory at the end of September, 1929, as compared with August, 1929. As compared with September, 1928, all grades, excepting paper board, felts and building, and hanging papers, showed substantial decreases in inventory. The total stock on hand for all grades was 0.3 per cent over August, 1929, but was 3 per cent below that of September, 1928.

Identical pulp mill reports for September, 1929, indicated that the total production of all grades of pulp was 3 per cent greater than September, 1928.

During September, 1929, 17 per cent more bleached sulphite pulp, 17 per cent more kraft and 13 per cent more ground wood pulp was consumed by reporting mills than in September, 1928. The total shipments to outside markets of all grades of pulp in September, 1929, were 6 per cent lower than the total for September, 1928.

All grades of pulp, excepting bleached sulphite, easy bleaching sulphite, mitscherlich sulphite and soda, showed decreases in inventory at the end of September as compared with the end of August, 1929. As compared with September, 1928, all grades, excepting easy bleaching sulphite and kraft pulp, registered decreases in inventory.

REPORT OF PAPER OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF SEPTEMBER, 1929

Grade	Production tons	Shipments tons	Stocks on hand end of month tons
News print	108,155	107,495	26,490
Book (uncoated)	89,192	88,804	39,665
Paper board	214,049	215,688	63,365
Wrapping	47,406	47,742	49,313
Bag	13,724	13,786	5,053
Writing	28,933	27,959	38,446
Tissue	13,123	13,698	8,552
Hanging	6,087	6,153	5,336
Felts and building	6,128	5,702	2,705
Other grades	24,453	23,847	16,389
Total—All grades	551,250	550,874	255,314

REPORT OF WOOD PULP OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF SEPTEMBER, 1929

Grade	Production tons	Used during month tons	Shipped during month tons	Stocks on hand end of month tons
Ground wood	66,431	83,736	3,048	69,335
Sulphite news grade	36,642	32,174	5,841	6,178
Sulphite bleached	24,756	23,413	1,051	2,879
Sulphite easy bleaching	3,088	2,837	207	827
Sulphite Mitscherlich	6,779	5,800	813	683
Sulphate pulp	29,539	24,571	5,221	6,017
Soda pulp	23,129	15,025	7,860	4,380
Pulp—Other grades	58	.....	.....	102
Total—All grades	190,422	187,556	24,041	90,401

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Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Edited by
RONALD G. MACDONALD, Secretary

Testing Unimpregnated Roofing Felt

Proposed Official Method of the Technical Association of the Pulp and Paper Industry

I. Sampling

The official Association method of sampling paper for testing shall be used. The test sample shall consist of not less than 10 sheets, not less than 13 x 13 inches in size.

II. Test Specimens

The test specimens shall be so selected from the test sample as to be representative of it.

III. Weight

The official Association method for determining the weight of paper shall be used. The total weight of not less than five sheets 12 x 12 inches in size shall be determined. Weight shall be reported both in pounds per 100 square feet and pounds per 480 square feet (see Section X-6), to the nearest whole pound.

IV. Thickness

The thickness shall be determined by the official Association method for thickness of paper. It shall be reported in decimal parts of an inch to the nearest .001 inch.

V. Strength

The bursting strength, tensile breaking strength, and tearing strength shall be determined by the official Association paper testing methods.

VI. Moisture

The amount of moisture shall be determined by the official Association method for moisture in paper. The test specimen shall consist of not less than 10 grams.

VII. Ash

The amount of ash shall be determined by the official Association method for ash in paper. The sample shall consist of not less than 5 grams.

VIII. Fiber Composition (See Section X-2)

The fiber composition shall be determined by the official Association method for fiber composition of paper, except that distilled water only shall be used in defibering the test specimen. (See Section X-7.) The following classes of fibers shall be reported:

1. Cotton and (or) linen
2. Jute and (or) manila
3. Wool
4. Chemical wood fibers
5. Groundwood fibers
6. Straw, esparto, cornstalk, bagasse, and other similar fibers
7. Unidentified fibers

IX. Saturating Properties

1. General

The measurement of the saturating properties of roofing felts is of value for estimating how they will react to the saturating materials. The kerosene test shall be used to determine the relative saturating capacity of felts. Either the oil penetration test or the xylol penetration test shall be used to determine the relative rate of saturation of felts. Tests of saturating properties shall be made on specimens conditioned according to the official method for conditioning, and in the atmospheric conditions therein specified. The details of these test methods follow.

2. Kerosene Test for Saturating Capacity (See Section X-3)

(a) Description of Test.—The "Kerosene Test" consists in saturating the sample of the dry felt with a measured volume of kerosene, which is adopted as being a suitable liquid saturant, for the purpose of determining the amount of voids in the sample, and the figuring therefrom of the theoretical possible per cent of asphalt saturation of the sheet. This calculation gives consideration to the weight of the sample, the volume of kerosene the sample will absorb and the specific gravity of saturating asphalt which is assumed to be 1.04. This determination gives the maximum percentage of asphalt the felt may normally be expected to hold within itself under ideal machine conditions.

(b) Apparatus.—The apparatus needed for this test consists of a 100 cc. beaker approximately 2 inches in diameter and 2½ inches in height, a small glass stoppered burette, graduated in 0.1 cc. preferably not over 25 cc. capacity, together with a suitable burette stand; a small balance sensitive to .01 grams, and suitable for rapid weighing of the sample; a supply of water-white kerosene of 45.0 degree Be. test; and a suitable oven for drying the sample.

(c) Procedure.—A sample of the felt is cut 2½ inches by 5 inches, weighed to an accuracy of 0.01 gram and tested; the weighing and testing should be done without delay as the dry felt rapidly absorbs moisture from the air. The burette is filled to the mark with kerosene and allowed to drain for 60 seconds before reading; the beaker is rinsed with kerosene and well drained prior to placing beneath the burette.

The weighed sample of felt is held slightly inclined from the horizontal with the left hand and a fine stream of kerosene is directed upon it from the burette, moving the sample about, meanwhile, to distribute the kerosene uniformly. As the felt sample

approaches the saturation point the rate of flow is reduced to a slow dropping and the sample is handled so that all excess kerosene falls into the beaker. The sample is treated with kerosene until darkened all over and until the entire surface possesses a characteristic glazed appearance. The flow of kerosene from the burette is then stopped and the sample held so that its diagonal is vertical and is drained over the beaker for exactly 30 seconds.

The saturated sample is then discarded, but the drained kerosene is poured from the beaker back into the burette and the burette is allowed to drain for exactly 60 seconds, after which the final reading is taken. The net cubic centimeters of kerosene consumed is a direct measure of the quantity of voids and this figure is used to calculate the kerosene test as described below. An alternative method is to omit pouring back the kerosene from the beaker, but to count the number of drops of kerosene drained from the sample, assigning an average value of 0.03 cc. to each and adding the total to the burette reading.

(d). Calculation of Results.—The theoretical quantity of asphalt the sample will hold is determined as follows:

(Volume of liquid in cc.) × 1.04 = Weight of asphalt in grams. (weight of asphalt in grams ÷ Weight of sample in grams) × 100 = Kerosene Test, or theoretical possible asphalt saturation. The average of not less than five determinations shall be reported.

3. Oil Penetration Test for Saturating Rate (See Section X-4)

(a) Description of Test.—The object of this test method is to obtain a gage of the rate at which dry felt, or roofing felt, may be expected to saturate under operating conditions upon the saturating machine. From a manufacturing standpoint the saturating rate is of first importance as it is a controlling factor in machine speeds obtainable upon the saturator and in the resulting percentage of saturation obtained in the roofing. The present test, considered in conjunction with the kerosene test, appears to give the information needed with regard to these saturating qualities.

(b) Apparatus.—No elaborate apparatus is required to carry out this test. A glass pipette viscosimeter and an accurate thermometer are the chief requirements in addition to the oil, receptacles for holding the oil, and a stop watch. A pipette viscosimeter is used to check the viscosity of the oil from time to time and this viscosimeter is easily made from an ordinary 50 cc. glass pipette. An accurate thermometer is needed to determine the temperature of the oil since its viscosity changes appreciably with a few degrees difference in temperature.

(c) Oil.—A clear, light bodied, petroleum oil, of carefully controlled viscosity, is used for the testing; for control work it is often advisable to have several mixtures of oil at hand which may be used according to variations in room temperature. The oil consists of clear paraffin oil to which a certain amount of clear light engine oil may be added to adjust the viscosity; the exact proportions vary according to the temperature at which the mixture is used. The correct oil should have a Saybolt universal viscosity of 253 seconds at the temperature at which it is used. This has been determined by tests upon the correct oil mixture to be used at 72 degrees F.; in order to further define the proper oil for use at the particular temperature of 72 degrees F. this oil when tested at a temperature of 100 degrees F. has a Saybolt universal viscosity of 125 seconds. With the usual grade of paraffin oil it is necessary to add only a small proportion of engine oil in order to get the proper viscosity for use at ordinary room temperature.

(d) Procedure.—The viscosity of the oil is determined with the control pipette and if not correct is adjusted either by changing the temperature or by changing the proportions of the oil mixture. When the correct oil viscosity has been obtained a sample 2 x 2 inches is gently placed upon its surface and the stop watch is started simultaneously. The sample is then watched while the oil is penetrating into it. When the sample surface is judged to have become darkened to 90 per cent of its area the elapsed time in seconds is noted and recorded.

A sample is first tested with the felt side up and then an adjacent sample is tested with the wire side uppermost, or the two samples may be tested simultaneously. The number of seconds required for the oil to penetrate from each side of the sheet is called the "oil penetration test" for the respective side of the sample. The average of not less than 5 tests made on each side of the felt shall be reported.

4. The Xylol Penetration Test for Saturating Rate

(a) Description of Test.—The principle of the "Xylol Test" is that of gaging the rate at which a light volatile liquid rises in a vertically suspended strip, the lower end of which dips beneath the liquid contained in a suitable dish.

(b) Apparatus.—The apparatus required consists of a supply of water-white Xylol (distilling at 140 degrees C. by the Engler Standard Method), a small dish or trough to hold the Xylol, and a larger dish to use as a water bath. A ring stand and movable clamp to hold the sample and dip it in the Xylol are also desirable. In addition to these a stop watch and a centimeter scale are necessary.

(c) Procedure.—The strips of felt for test are prepared by being cut in the machine direction of the sheet 15 mm. wide, and of sufficient length, for example 12 cm.; these are marked by drawing pencil lines across each one at points exactly 1 cm. and 4 cm. away from the lower end.

The strip is then clamped in a vertical position by its upper end well above the surface of the Xylol. To start the test the clamp and strip are quickly lowered until the surface of the Xylol is exactly at the 1 cm. mark. Care should be taken to keep the temperature of the Xylol at exactly 77 degrees F. and the water bath is specified for this purpose. For sake of convenience in noting the end point a small amount of oil soluble aniline dye may be added to the Xylol. By means of the stop watch the time is recorded in seconds required for the Xylol to rise by capillarity up to the 4 cm. mark; that is, the time required by the liquid to rise exactly 3 cm. is noted and reported as the "Xylol Test." The average of not less than 5 tests shall be reported.

X. Additional Information

1. Increasing the Capacity of the Elmendorf Tearing Tester, F. T. Carson and L. W. Snyder, Paper Trade Journal, March 29, 1928.

Reports of Committee D-8, A. S. T. M. Determination of the Fiber Composition of Roofing Felts, R. E. Lofton, Paper Trade Journal, April 7, 1927.

3. The Kerosene Test for Roofing Felt, P. W. Codwise, Paper Trade Journal, September 20, 1928.

4. The Oil Penetration Test for Roofing Felt, P. W. Codwise, Paper Trade Journal, March 1, 1928.

5. A Discussion of Testing Methods for Roofing Felt, P. W. Codwise, Chairman, Committee on Roofing Felt and Paper Board, Technical Association Papers, May, 1929.

6. Expression of weight on a basis of 480 is in accordance with trade custom, but weight of impregnated felts and other heavy papers is commonly expressed on a basis of 100 square feet, therefore the latter is included to encourage its use as a more desirable standard practice.

7. The use of distilled water only, in defibering the microscopical test specimen, was specified in the A. S. T. M. tentative method for analysis of roofing felt for fiber composition, as caustic soda was considered to have an adverse effect on wool fibers which are commonly present.

Asphalt Emulsions in Paper Making

By Joseph Rossman[1]

During the last ten years a large number of patents have been granted for the use of asphalt emulsions in making tarred or asphalt saturated felt for making prepared roofings or for uses as sheathing or building paper. It has been customary previously in the manufacture of such roofing materials, to use so-called dry felt or unsaturated felt or paper which is ordinarily water-proofed by saturating with bituminous material, and often the saturated felt is coated with a superficial layer, on one or both faces, of asphalt or other waterproofing and weather-resisting material. The dry felt or dry roofing paper is generally manufactured from old rags or other fibrous materials which are beaten in the presence of a large amount of water into a pulp, either alone or in combination with beaten old papers, and the pulp is formed into sheets in the manner common in the manufacture of papers and felts.

It has been found possible to incorporate a large amount of asphalt or other waterproofing material in fibrous material as felted on a paper machine by forming it into an emulsion, as for example, according to the Kirschbraun Patent No. 1,302,810, dated May 6, 1919, for bituminous composition and process of making it. Briefly this process consists in stirring melted asphalt into a hot mixture of water and colloidal clay. When considerable quantities of this emulsion, which is known in the trade as K-B emulsion, are added to the furnish for the paper machine, the felting of the cellulose fibers is quite satisfactory, but the asphalt renders the material so sticky that much trouble has been experienced from the sticking of the felted sheet to the blanket and drying rolls of the paper machine.

In order to overcome this difficulty, patent No. 1,515,821, dated Nov. 18, 1924, to Avery, uses a multi-cylinder machine, the outer plies of the felted material being formed of fibrous material without the emulsion, and the inner ply or plies being supplied with the emulsion. Since the outer plies only are in contact with the blanket and drying rolls, and they contain no asphalt, sticking is entirely prevented.

In the product as delivered from the machine the asphalt is coalesced about the fibers of the inner plies. The outer plies may then be removed by scrubbing the faces of the sheet while wet, the coalesced asphalt preventing the inner plies from disintegrating by the scrubbing operation so that the final product is highly saturated fibrous material. The material is then air dried and may then be surfaced by dusting powdered talc or mica thereon, to prevent the convolutions of the material when wound in rolls from adhering.

Referring to Fig. 1, A indicates a multiple cylinder paper machine. This machine comprises vats 1, 2, 3, 4 and 5 for containing the pulp which is to be formed into felted material. Within each one of these vats is positioned the take-up roll, as shown at 6, 7, 8, 9 and 10. The pulp for the vats 1 and 5 is formed from suitable cellulosic material, such as rags, and the pulp for vats 2, 3 and 4 has in addition to this cellulosic material considerable quantities of asphalt emulsion, such as the K-B emulsion. The particular amounts of this material depend upon the amount of saturation desired and to the character of the cellulosic material used. A blanket passes over the upper surfaces of each of the take-up rolls 6, 7, 8, 9 and 10 in the usual manner and passes over end rolls 11 and 12, traveling in the direction shown by the arrow, first taking up a layer of cellulosic pulp from the take-up roll 6, this layer being indicated in Fig. 2 at s. This adheres to the under face of the blanket in the usual manner. As this portion then passes over the take-up roll 7 a layer of cellulosic material having a large portion of asphaltic emulsion is deposited on the under face of ply s. As the blanket then passes over the take-up roll is formed. A third layer of similar saturated fibers is then added by the take-up roll 9. The material then passes to the take-up roll 10 which deposits a layer of cellulosic material without asphalt. The composite sheet thus formed, which is still adhering to the under side of the blanket, then passes about the end roll 12 and the fibrous material is removed therefrom and passes over the superposed roller 13 in the form of a continuous web or sheet. The blanket passes back to the roll 11 and is presented to the various take-up rolls in the same order continuously.

The continuous sheet is then fed from the roll 13 through a series of drying rolls B. During this drying operation the asphalt in the emulsion coalesces to form with the cellulosic material in fibrous sheet saturated completely with asphalt. Next the opposite faces of the web, which contain no asphalt, are subjected to the action of water jets C, which softens the outer unsaturated plies, but has no effect on the intermediate saturated plies, since the asphalt has coalesced as above noted and is waterproof. The fibrous outer plies having been thus softened, the material is passed between stiff brushes D, which scrape the unsaturated fibers from the surface and such fibers as may not be entirely removed from the sheet material by these brushes may be scraped by scrapers E. The web is then air dried, and it is dusted with powdered mica or talc at F in order to prevent the successive convolutions from adhering to the roll.

The Use of Comminuted Pitch

A process has been proposed by which comminuted particles of solid waterproofing material are introduced into the paper pulp on an ordinary paper-making machine, and become embodied in the sheet of felt or paper as it is formed. If, however, the waterproofing material is of such nature that it becomes sticky at the temperatures reached on the drying rolls, the rolls become gummed up and the sheets are unsatisfactory. By using waterproofing material of such high melting point that it does not become plastic or sticky at the temperatures reached during the drying operation, this difficulty of sticking to the drying rolls may be overcome,

[1] Assoc. Member TAPPI; Patent examiner, Patent Office, Washington, D. C.

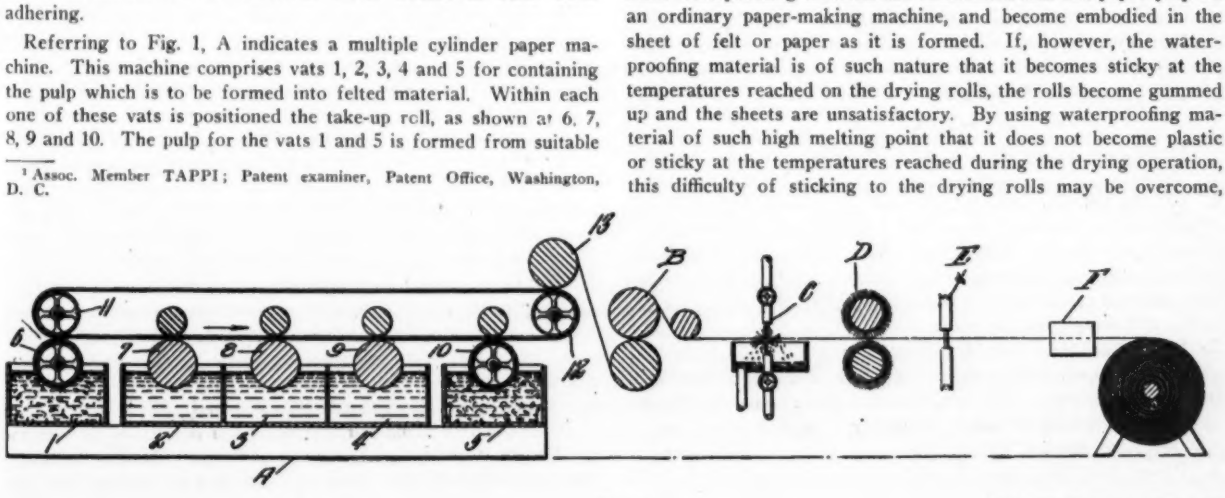


FIG. 1.

but in such cases, the waterproofing material is generally so hard and brittle at ordinary temperatures that the sheet is correspondingly hard and brittle when a considerable proportion of the waterproofing material is incorporated therein.

Moreover, high melting point waterproofing material is usually comparatively viscous when melted and the result is that when sheets containing such high melting point waterproofing material are heated and pressed, the waterproofing material because of its viscous nature does not at times spread as evenly and thoroughly through this sheet or bodies as would be the case if liquid or semi-liquid low melting point less viscous waterproofing material were used.

In carrying out the process of patent No. 1,657,585, dated Jan. 31, 1928, to Perry, there is added to the watery pulp of paper stock fibers such as rag stock, wood fibers, straw, etc., comminuted particles of solid high melting point waterproofing material, such as pitch, asphalt, etc., together with an amount of emulsion of liquid or semi-liquid waterproofing materials, such as flux oil, coal tar, etc. This mixture of fibrous and waterproofing material is well stirred in the beater and introduced into the vat of a cylindrical paper-making machine, whereupon the sheet containing a mixture of paper stock, high melting point waterproofing material, and the emulsion becomes formed and is picked up by the "wet blanket" in the ordinary way. The presence of the emulsion appears to increase considerably the mechanical strength of the sheet and at the same time no trouble arises due to the sheet sticking to the hot drying rolls.

In making the emulsion 6 parts of a coal tar residue melting at approximately 100 deg. F., and 4 parts of clay mixed in water are used. As an example 70 per cent of pitch in comminuted particles of a melting point of 300 deg. F. together with 10 per cent of an emulsion and 20 per cent of paper stock is used. This mixture in the paper making machine readily forms a sheet on the foraminous cylinder which does not stick either to the foraminous cylinder of the paper making machine, or to the press rolls that are used for squeezing out the water, or to the driers. A sheet so formed can be made in different thicknesses by having different amounts of suction on the paper-making cylinder and the sheets can be rolled up on a roll.

The sheets formed may be heated and pressed individually or a number of these sheets may be piled together and pressed in like manner thus densifying the sheets and producing a more desirable distribution of the water-proofing material. The high melting point waterproofing material may possess considerable viscosity even at the high temperatures used in the pressing operation and consequently does not always spread as evenly and uniformly as is sometimes desired, but the low melting point or less viscous waterproofing material that was introduced in the form of an emulsion readily spreads during the hot pressing operation and overcomes the objection that would arise if only the high melting point waterproofing material were present.

Patent Review

The following abstracts give a survey of the patents describing the use of asphalt in paper making:

1. Catlin, 429,999. June 10, 1890.

The process consists in combining a fibrous material with a cementing agent such as pitch in a pulverulent state by mixing the substances together with water, and after a thorough mixture has been obtained removing the surplus moisture, fusing the cementing agent, and compacting by pressure.

2. Perry, 1,288,158. Dec. 17, 1918. Reissue 15,461. Sept. 26, 1922.

The process of making paper consists in forming a sheet containing comminuted fusible waterproofing matter, applying thereto one or more layers of paper containing a smaller proportion of waterproofing material and drying.

3. Perry, 1,288,159. Dec. 17, 1918.

Felts are made by coating filaments of flexible asphaltic material with dry comminuted fibrous material while the filaments are in a soft, adherent condition, and thereafter by pressure forming the fiber-coated filaments into sheet form.

4. Elliott, 1,305,081. May 27, 1919.

The process of producing fibrous waterproof sheet building felt consists in forming a flexible porous sheet out of comminuted fusible waterproofing material mixed with a fibrous material, and then applying heat to the sheet in order to melt the waterproofing material.

5. Perry, 1,305,404. June 3, 1919.

The process of making felt comprises adding a predetermined quantity of bituminous filaments, mixing the pulp and bituminous filaments intimately together, forming the mixture into a layer, forming a felt by drying the layer, softening the bituminous filaments slightly to it to adhere more closely to the other material present in the felt and impregnating the felt with bituminous material.

6. Perry, 1,316,591. Sept. 23, 1919.

The process of producing a laminated conduit comprises the steps of first forming a sheet of fibrous watery pulp containing distributed therethrough a substantial amount of comminuted pitch, extracting a substantial amount of the water from the sheet, subsequently winding the sheet to form a cylinder composed of a plurality of contacting layers, and drying the contacting layers to expel all of the moisture contained therein and to cause the layers to become united together.

7. Perry, 1,338,037. Apr. 27, 1920.

The process of producing an impervious waterproof construction material, comprising the steps of forming at ordinary temperatures a mixture of a watery pulp of fibrous material, and about three times as much bituminous material by weight as the weight of the fibrous material, forming the mixture into a layer, and thereafter without evaporating the water in the layer, subjecting the layer to great pressure to form it into a sheet impervious to water.

8. Perry, 1,360,313. Nov. 30, 1920.

The process of forming a composite sheet of felt comprises supplying a vat from independent sources of supply with watery pulps at points below the overflow from the vat and revolving a sheet-forming cylinder therein while maintaining the pulps separate from each other.

9. Perry, 1,386,277. Aug. 2, 1921.

A sheet of porous, flexible building felt consisting of between 10 and 90 per cent of waterproofing material in the form of rounded bituminous particles in size which will pass through a thirty mesh screen but will be caught on a hundred mesh screen.

10. Kirschbraun, 1,401,791. Dec. 27, 1921.

An aqueous bituminous stock capable of being felted on a paper making machine, consisting of a mixture of fibrous pulp and a nonadhesive emulsion of bitumen, colloidal clay and water in which the bitumen is dispersed in particles sufficiently fine to pass through a 200 mesh sieve.

11. Elliott, 1,406,174. Feb. 14, 1922.

The process consists in intimately mixing wet pulp with finely-divided asphaltum, compressing the wet mixture under heavy pressure without a preliminary application of heat, then coating the mass with baking or stoving japan, and finally baking the mass at a temperature high enough to melt the asphaltum.

12. Perry, 1,438,966. Dec. 19, 1922.

The process of producing a construction material comprises forming a series of layers of mixed fibrous material and comminuted pitch, the layers progressively varying in the proportion of pitch, and uniting the layers by heat and pressure.

13. Ellis, 1,449,221. Mar. 20, 1923.

The method of producing insulating board consists in immersing fibrous stock in liquid bitumen and water, then agitating the materials, whereby the fibers are coated with bitumen and the

stock is pulped, then molding or felting the stock into a board and finally drying.

14. Howell and Eckert, 1,511,475. Oct. 14, 1924.

The process comprises forming a sheet of construction material from a mixture containing fibrous material such as wood and rag stock and sawdust that had been previously waterproofed, removing the water from the sheet and saturating it with waterproofing material.

15. Commin, 1,511,949. Oct. 14, 1924.

A process for manufacturing composite material from pitch and fibrous material, consisting in mixing together extremely finely divided and deflocculated peptized pitch and fibrous pulp, conditioning the product to permit it to be readily felted into sheets, and felting on a paper making machine.

16. Avery, 1,515,821. Nov. 18, 1924.

The method comprises forming multi-ply sheet material, one ply being made from fibrous pulp and one or more plies of such pulp having a large proportion of saturant incorporated therein, and then removing the pulp ply to leave only the ply or plies containing the saturant.

17. Kirschbraun, 1,526,552. Feb. 17, 1925.

The process of making moisture-proof paper consists in forming a plurality of fibrous webs and applying between the webs a film of pitchy material in an aqueous vehicle.

18. Kirschbraun and Morse, 1,526,553. Feb. 17, 1925.

A process of making waterproof paper consisting in forming a plurality of fibrous webs on a paper machine, and applying to one of the webs as it is being formed locally, a waterproof pitch in an aqueous vehicle.

19. Kirschhbraun, 1,536,399. May 5, 1925.

The process comprises mixing water, papermaking stock and a non-adhesive emulsion containing waterproofing material emulsified with clay, and forming on a paper-making machine a sheet from the mixture.

20. Kirschbraun, 1,537,949. May 19, 1925.

A waterproof sheet consisting of a solid bitumen containing its native non-bituminous matter, flux intimately mixed therewith to form a homogeneous mixture, an emulsifying agent and fiber mixed with the bitumen, the whole being formed into a sheet and having the characteristics of having been formed on a paper machine.

21. kirschbraun, 1, 537, 950. May, 19, 1925.

A process of making a waterproof sheet consisting in forming a mixture of fiber and a bituminous emulsion into a body portion, simultaneously forming a fibrous stock into an outer ply portion, uniting the outer ply to one surface of the body portion to form a unitary structure, drying the sheet and allowing the bitumen to coalesce.

22. Kirschbraun, 1,542,557. June 16, 1925.

A process of making a felted fibrous composition consisting in passing an open mesh fabric sheet through a vat containing paper stock in an aqueous vehicle, causing the paper stock to felt on the fabric, removing the water and drying the sheet and impregnating the product with an adhesive waterproof binder introduced as a non-adhesive emulsion during the felting operation.

23. Kirschbraun, 1,561,728. Nov. 17, 1925.

A waterproof fibrous composition, comprising fibrous stock having incorporated therewith a bituminous material dispersed in an aqueous vehicle with sulphite liquor.

24. Morse, 1,563,642. Dec. 1, 1925.

A process for producing waterproofing material, consisting in forming a sheet from fibrous stock on a forming cylinder, imposing a layer of waterproofing material in the form of an emulsion on the surface of the sheet immediately subsequent the forming operation, and intimately combining the waterproofing and the sheeted stock by subjecting the coated and formed sheet to a local vacuum action subsequent to the imposition of the waterproofing material on the sheeted surface.

25. Perry and Adams, 1,577,074. Mar. 16, 1926.

The process which comprises forming a layer containing fibrous material and waterproofing material, applying thereto a layer containing asbestos and waterproofing material, the latter layer being wider than the former and having its edge extending around the edge of the former.

26. Kirschbraun, 1,606,427. Nov. 9, 1926.

A process of recovering waste fibrous products having incorporated therein a bituminous waterproofing binder comprising subjecting the waterproofed fibrous products in an aqueous vehicle to beater action at an elevated temperature approximating the melting point of the binder contained in the fibrous stock causing separation of the fibers from the bituminous material, precipitating the disengaged bitumen on the separated fibers, producing an envelope and felting the stock on a paper machine.

27. Kirschbraun, 1,606,428. Nov. 9, 1926.

A process consisting in forming a multiply sheet on a paper machine, introducing into predetermined inner plies simultaneously with their formation into a united sheet, fusible pitchy waterproofing material in non-adhesive form and interposing between the waterproofed plies an independent layer of non-sticky material functioning as a parting medium.

28. Kirschbraun, 1,616,901. Feb. 8, 1927.

A process for making a waterproofed multiply sheet consists in uniting a plurality of wet fibrous plies and simultaneously with the formation of the plies interposing by a rolling action a continuous waterproofing film between a plurality of plies, the waterproofing film being in the form of an emulsion miscible in water at the time it is applied.

29. Kirschbraun, 1,616,902. Feb. 8, 1927.

A method of making a waterproofed sheet, comprising separately forming a plurality of fibrous plies on forming elements of a paper machine and subsequently to leaving the forming element causing the sheet to contact a rotating element for applying a waterproofing coating in the form of an emulsion miscible in water to the upper surface of one of the wet plies, then pressing all of the plies together to form a unitary sheet, and removing the water.

30. Kirschbraun, 1,616,903. Feb. 8, 1927.

A method of making waterproofed paper, comprising forming on a paper machine, a plurality of fibrous plies, interposing during the paper forming operation a layer or layers of liquid repellent material between predetermined inner plies by causing the wet plies to pass in contact with a rotating surface carrying the liquid repellent material, uniting the plies to form a sheet, separating the sheet at the point of the interposed liquid repellent layer and drawing off such separated sheets.

31. Rahr and Kirschbraun, 1,616,921. Feb. 8, 1927.

A waterproof, fire resistant multiply sheet consisting of a plurality of felted plies, one or both of the outer plies being formed of substantially incombustible fiber, the inner ply or plies being formed of fiber of a different character, and a continuous pitchy medium extending through and saturating the inner ply or plies, the sheet possessing the characteristics of having been united while simultaneously formed from wet pulp.

32. Kirschbraun, 1,621,791. Mar. 22, 1927.

A process for making a felted fibrous composition having a waterproofing binder comprising fluxing a heated asphaltic waterproofing substance with an asphalt soluble acid and emulsifying the mixture with finely divided colloidal powders held in suspension in an aqueous vehicle, mixing the emulsion with a fibrous pulp in an aqueous vehicle and adding a reagent to produce an insoluble soap with an asphalt-soluble acid before finally passing the composition over the paper machine.

33. Perry, 1,657,585. Jan. 31, 1928.

The process comprises introducing paper stock, comminuted particles of high melting point waterproofing material and an emulsion

or viscous waterproofing material into a paper making machine and forming a sheet therefrom.

34. Perry, 1,663,095. Mar. 20, 1928.

The process which comprises forming a sheet containing fibrous material and an emulsion of bituminous material, clay, and water; drying water out of the sheet; and passing the sheet through a hot bath of asphaltic material of low melting point.

35. Kirschbraun, 1,672,262. June 5, 1928.

A felted water-resistant sheet comprising fibrous material having a pitchy binder coating the fibers in the form of a substantially continuous film, and a clay-like dispersing agent, the sheet possessing the characteristics of having its fibers felted in the presence of the binder.

36. Bache, 1,691,752. Nov. 13, 1928.

The process of preparing moisture-proof paper board consists in simultaneously introducing into a receptacle paper pulp, a waterproof hydro-carbon in liquid form, and an emulsifying agent for the hydro-carbon, then forcing the ingredients while in rapid motion through a restricted passageway of not more than .05 of an inch in width to thereby absorb the hydro-carbon on the fibers of the pulp, and finally pressing and drying the stock so produced into sheet form.

37. Perry, 1,707,491. Apr. 2, 1929.

The process comprises mixing in water, papermaking stock and an emulsion containing waterproofing material and steatite of a hardness of approximately 1, and forming on a paper-making machine a sheet from the mixture.

38. Kirschbraun and Clapp, 1,708,926. Apr. 9, 1929.

A process of making waterproofed paper, which comprises bringing together a batch of fibrous stock and a batch of dispersion of a bituminous base in an aqueous medium, one of the batches containing a precipitant in quantities sufficient to produce an acidic condition in the mixture of fibrous stock and dispersion whereby to cause the bitumen to clot in unaltered state upon the fibers, and running off the mixture on a paper making machine.

39. Kirschbraun, 1,708,927. Apr. 9, 1929.

A process of making a waterproof composition containing material comprising enveloping pitchy waterproofing material in finely divided comminuted condition with a protective coating, precipitating the waterproofing material on fibrous stock and forming the stock into sheets.

40. Perry, 1,710,320. Apr. 23, 1929.

A construction material containing approximately 30 per cent asbestos fibers felted together and approximately 70 per cent bituminous material intimately mixed therewith and fused so as to form a homogeneous mass.

41. Kirschbraun, 1,722,434. July 30, 1929.

A process of producing a waterproofed felted sheet, comprising mixing in water fibrous stock and a dispersion containing a heat liquifiable waterproofing material dispersed in an aqueous medium, regulating the proportions of fibrous stock relative to the waterproofing material so as to produce a sheet which is incompletely saturated with the waterproofing material, but in which the waterproofing material is uniformly distributed in the form continuously coalesced films about the fibers, sheeting the stock, and drying.

42. Kirschbraun, 1,723,355. Aug. 6, 1929.

A process of forming waterproof paper, consisting in forming a non-adhesive matrix contained in an aqueous vehicle, and having a waterproof adhesive pitchy binder, the particles of binder being dispersed and sufficiently small that they will pass through a wire mesh having 40,000 openings per square inch, mixing the above matrix with fibrous pulp and then forming into sheets and drying out the aqueous vehicle.

43. Kirschbraun, 1,725,645. Aug. 20, 1929.

A process of making a waterproof multi-ply sheet consisting in forming a plurality of fibrous plies upon a multi-cylinder machine, the stock of a plurality of the plies having mixed therewith a normally adhesive bitumen in non-adhesive emulsified form, removing the water from the sheet and causing the bitumen to coalesce as a continuous film coating the fibers.

44. Kirschbraun, 1,725,646. Aug. 20, 1929.

A process of making a floor covering, consisting in passing a mixture of fibrous stock and a non-adhesive emulsified matrix containing water, a colloidal agent and a pitchy body dispersed therethrough, over the cylinders of a multicylinder paper machine, simultaneously forming a felted ply of a fibrous stock on an outer cylinder of the machine without the addition of the emulsified matrix, sheeting and drying the stock, coalescing the pitchy binder in the inner plies, calendering the sheet and simultaneously applying an impregnating coating to an outer ply thereof in the form of a drying oil of a different color than that of the pitchy medium, and thereby providing a surface on which a pattern or design may be readily printed.

45. Kirschbraun, 1,725,647. Aug. 20, 1929.

A process of producing a multi-ply sheet consisting in forming a plurality of webs of fibrous stock on a multi-cylinder machine, incorporating into the stock forming the inner ply emulsified bitumen in non-adhesive state, uniting the plies while wet and simultaneously drying the sheet and coalescing the bitumen, and subsequently passing the sheet through a saturating liquid.

Beater Control*

By Arthur B. Green[1]

Nothing has characterized the progress of paper making in the last fifteen years more sharply than the rise in the use of technical methods. This period saw the inception and growth of the Technical Association, outwardly expressing what mill people increasingly felt inwardly, that the best management may be based upon fact. Up to fifteen years ago there had scarcely been an attempt to find by analysis the facts pertaining to the preparation of paper stock in the beaters, and it was only a few years prior to the day when the Technical Association came into being that a careful search failed to disclose anywhere, in any language, facts that had been derived in an engineering way about that process.

Study of beating has its difficulties. Perhaps a good many of the studies that have been made in recent years have had unnecessary difficulties. Chemistry, physics, mechanics, to name three of the obvious ways of going at it, can be applied to the problem in endless detail without leading to results of any practical benefit, because the beater and the process which it performs mean nothing by themselves. Beating is of course a means to an end. The end is a composite of certain qualities of characteristics in the final paper which in turn induce people to buy it on the market. Beating can be evaluated only in terms of these marketable qualities, according to its success in producing them, and according to the expenditure as compared with a determined standard. To be practical, therefore, it is well to connect every element in the process of beating with its effect on bursting strength, folding endurance, sizing effect, shrinkage on drying,

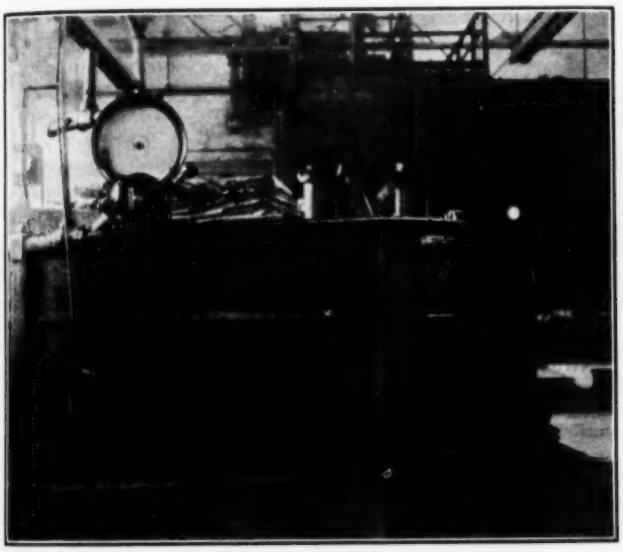
* Presented at fall meeting Pacific Coast Section of TAPPI, Tacoma, Wash., Oct. 5, 1929.

[1] Member TAPPI; Consulting engineer, Portland, Ore.

bulk, freeness, and the like, qualities that directly or indirectly describe the paper being made.

Keeping carefully in mind this connection between beating and its practical purpose, it was possible to discover in the year 1914 for the first time that a comparatively simple law underlies the process. As beating proceeds, whatever the type of beating equipment, certain changes take place in the frictional factors of the mass of stock, when that mass is considered as a fluid. The degree of these changes and the rapidity with which they develop are an index of the changes taking place in bursting strength, slowness, folding endurance, shrinkage, sizing effect, bulk, as the stock undergoes treatment. For a more extended report on that point with proof from experiment we may refer to a paper given before the Technical Association at its 1916 annual convention and published in *"Paper"* for February of that year, under the title, "Management of the Beater Room".

It is from these early beginnings, using this simple law, which has been continuously in use in one form or another, that we



GREEN BEATER CONTROL ATTACHED TO SIDE OF BEATER

come to the methods available today whereby we can do with precision in the beater room what we have all along left to guesswork. By precision we mean that the density of the stock can be governed within an error of two-tenths of one per cent, and that the adjustments of the beater roll can be prescribed so as to result in uniform paper-making qualifications after beating.

Internal Friction

The present instrument for control of beating consists of a rotating body with fins or paddles turning under the stock at a fixed speed. The depth of submergence is constant. The form is designed so as to emphasize the factor of internal friction in the mass of pulp rather than skin friction, since of the two the greatest changes take place in internal friction. Otherwise the form of the rotating body is not limited in any way. Driving this at constant speed under a fixed submergence, we read the variations in power used for driving the rotating body. It is not the purpose of the instrument to perform any treatment upon the stock, but merely to measure and record the changes that take place in the stock as a result of treatment by the beater.

Any form of drive would serve, so long as the speed is constant. For convenience we use a fractional horsepower induction motor taking its current from the lighting circuit. The average amount of power is about that of a 40-watt lamp. In order to avoid the varying power factor of the motor, we employ a small torsion dynamometer to measure the fluctuations of actual power mechanically, and from this dynamometer we multiply the movement to our recording chart. The result is an extremely sensitive indication of every change in the stock, the gradual changes as well as the momentary changes.

Beating Variables

The typical beating curve starts with a broad line and ends with a narrow line. The width of the line represents the degree or unevenness in the furnish, since every thick portion of stock raises the reading and every thin portion drops it. Thus we have a precision record showing how well the beater is mixing. Each time that size is added, whether in milk or soap form, the reading drops. The amount of drop is proportional to the amount of size. Each time that alum is added, whether dry or in solution, the reading rises. Thus we have a record showing when these ingredients went in and whether or not the right quantities were used. Not only the adjustments of the beater roll, but the routine of furnishing as well are thus made subject to standard practice by schedule.

To govern the density of furnish, a standard practice is laid out whereby the height of stock in the beater is kept constant while fresh fiber is added, and under those conditions the reading is brought up to a scheduled amount. With no preliminary practice it is found that the ordinary beaterman is able to furnish successive beaters within an error of two-tenths of one per cent. That means his beaters are uniform in density within 40 to 60 pounds of papermaking material. In the most up-to-date mills on this Coast, laboratory tests show that under the usual practice, that is, without this beater control, the variations in amount of paper making material in the beater amount to 400 to 600 pounds. In other words, the difference between having control and not having it amounts to the capacity of approximately one beater in every six.

Samples Marked in Code

On one occasion, where this principle of control was employed, full width samples were taken of every reel turned up on the paper machine on the same order for a period of three weeks. These samples were marked in code and submitted to an unbiased observer, one who at the time was responsible for the inspection of all the products from the mill. Studying the samples for several hourse carefully, he stated that he would have said that all the samples had come from the same reel.

To put control on the beater, it is necessary merely to make three bolt-holes in the side of the tub, mount the instrument, connect it with lighting current, and it is ready for work.

TAPPI Notes

C. D. Goodwin, formerly of Central Paper Company, Muskegon, Mich., has joined the technical staff of the Brompton Pulp and Paper Company, Ltd., East Angus, P. Q.

Otto Kress, formerly of Thilmany Pulp and Paper Company, Kaukauna, Wis., is now technical director of the Institute of Paper Chemistry at Lawrence College, Appleton, Wis.

E. H. Colesworthy, of the Uuion Bag and Paper Company, Hudson Falls, N. Y., has been transferred to the New York City office of the company.

John S. Bates, research engineer of Price Bros., Ltd., is now visiting in Europe.

Crown-Willamette to Reforest 1400 Acres

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., November 15, 1929.—The Crown-Willamette Paper Company will start reforestation of 1,400 acres in the Young's River district near Astoria, Ore., in December. The company has already reforested about 6,000 acres in that region and a policy of replanting land as fast as it is logged has been established. About 600,000 young trees, chiefly spruce, will be planted on the Young's River tract.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts and Bibliography of the Technical Association of the Pulp and Paper Industry

By Clarence J. West, Chairman

Fourdrinier Paper Machine. J. K. Darby assignor to F. C. Trowbridge. U. S. pat. 1,679,854, Aug. 7, 1928.—The object of the invention is to apply both the telescopic principles of Darby's U. S. pat. 1,436,240, of Nov. 21, 1922, and those of the Marshall type (U. S. pat. 507,744, Oct. 31, 1893), in which the machine has all the wire carrying parts on a transversely movable truck, the idea being to apply these features to a machine having a sealed top couch housing. The machine is constructed in such a manner that the principle of telescopic wire stringing is applied without removing any rolls from the frame within the wire loop, and the entire machine table and bottom couch roll are passed through the wire loop at one time. All the rolls within the wire loop are withdrawn, requiring but one operation in forming a slack loop from the couch to the breast housing. A downhill auxiliary lift system is applied to aid in the transverse movement, both forward and return, of all the machine elements within the wire loop. A cable system is provided to aid in stringing the wire, so that the latter may be replaced on wide machines without injuring the fabric. The breast housing, deckles, forebay, head box, slices and lock bolts are so arranged that in replacing them, after changing wire, they are returned to their original positions within 0.001 inch. The breast end of the machine is raised and lowered on and off the auxiliary wire stringing lifts by means of the normal breast roll vertical adjustment. Further features which are provided in the construction of the machine are: a self-contained water supply system and suction manifold, a compound self-contained shake, a curved plane forming table vertically adjustable, and a double roll suction box system in combination with a high speed rotary vacuum pump. The two fundamental principles of the invention are: (1) all the parts within the wire loop are moved transversely of the main portion of the machine, with the removal of but few parts, and (2) at the couch end of the machine the lower couch roll is moved longitudinally towards the main body of the machine.—A. P.-C.

Suction Roll. E. E. Berry assignor to Beloit Iron Wks. U. S. pat. 1,679,598, Aug. 7, 1928.—The suction box inside the roll is provided with a flexible packing head adapted to be resiliently balanced throughout its length. Roll sealing means are provided in the form of strips along the sides and ends of the box, which allow free floating moving of the packing head, while at all times maintaining an air tight joint. The packing head is so constructed and supported as to practically balance the pressure on both sides thereof, so that the contact pressure between the head and the inner surface of the rotating shell may be independently adjusted to any desired degree.—A. P.-C.

Mechanism for Uniformly Interweaving Fibers Delivered to Paper Machine Wires. A. Aldrich. U. S. pat. 1,682,460, Aug. 28, 1928.—In order to obtain proper interweaving of the fibers on the machine wire, the pulp is agitated just inside the feed box or pond. To this end, two bars are mounted across the inlet just inside the slice. Each bar is provided with prongs or fingers extending downwards so that their lower ends are well in front of the stock outlet. The bars are given a reciprocating motion across the front of the outlet, the motion of the two bars at any instant being always in opposite directions.—A. P.-C.

Stock Inlet for Fourdrinier Paper Machines. R. E. Heisel assignor to The Mead Pulp & Paper Co. U. S. pat. 1,687,447, Oct. 9, 1928.—The inlet is provided with a lip plate extending across the full width of the machine, and which can be adjusted to allow of regulating the amount of stock delivered on to the wire. Under the main lip plate is an auxiliary flexible plate which can be adjusted at various points to compensate for minor variations in the thickness across the width of the sheet. The sides of the inlet are closed off by means of two vertical plates. At each end of the inlet is a plate which can be slid sideways to restrain the stock when the deckle of the sheet is altered. The apron, lip plates, side plates, and deckle pulleys are mounted so that they can be raised as a unit when the wire of the machine has to be changed, and they can be lowered back into position without disturbing their relative adjustment.—A. P.-C.

Pulp Freeness and the Alkali Solubility of Pulp Slimes. C. G. Schwalb. Wochbl. Papierfabr 59. Special No. 107-198 (1928).—There is a relation between alkali solubility and Schopper. Riegler freeness, which may be adapted to control testing. Solubility values of pulp beaten to give a freeness in a Lampen mill are lower than when the pulp is treated in the beater. The alkali soluble material is determined by treating a 15 gram sample, with 30 percent sodium hydroxide and water to make a total of 150 cc. 16 percent sodium hydroxide, precipitating the dissolved material in an aliquot with nitric acid, adding ethyl alcohol, centrifuging

Pulp Thickener and Saveall. J. T. Hoyt assignor to United Filters Corporation. U. S. pat. 1,685,084, (Sept. 25, 1928). This is a drum type of filter or saveall, in which wood or metal staves extend across the rim portions of the drum so as to form a substantially air-tight partition between the inner and outer portions of the drum. On top of the staves are a number of division or spacing strips running longitudinally and circumferentially of the drum; some of these strips are solid so as to divide the surface of the drum into a number of separate vacuum compartments, while others are provided with cut out portions to permit the vacuum to be communicated and the white water to be drawn through into the nearest vacuum pipe. Suitably perforated filter plates are placed over the spacing strips. The space between the outer surface of the staves and the filter plates is provided with vacuum connections, such as pipes extending through one of the trunnions and connected to a rotary plug valve, such as the one described in O. J. Slisbury's U. S. pat. 1,259,139, March 12, 1918. The distributing valve may also be provided with a pressure connection so that compressed air may be forced through the screen plate to remove the pulp before the screen is again immersed in the stock. In order to effect a complete removal of the pulp from the surface of the drum, and to clean the filter plates, a rotating brush is provided, extending the full length of the drum, at the point where it enters the vat. This brush may be provided with bristles or may be covered with felt, and is driven to rotate so that the engaging faces of the drum and brush move in opposite directions.—A. P.-C.

Threading Device for Papermaking Machines. R. E. Read assignor to International Paper Co. U. S. pat. 1,687,847, Oct. 16, 1928.—A finger, preferably made of lignum vitae, and having a cutting point, is provided, which can engage with the surface of the roll (press, drier or calender) in connection with which it is used, and by drawing the point across the surface of the roll it severs the lead strip used in threading the paper through the machine, when this strip adheres to the roll. The cutting finger is fixed to the inner end of an operating rod mounted to slide horizontally in a fixed bearing at the side of the roll, and this

rod may be turned in its bearing to swing the active end of the finger to and from the roll. Arranged above the line of action of the cutting finger, so as to act on the end of the severed lead strip, is a fixed nozzle constructed and mounted so as to deliver a blast of compressed air across the full width of the lead strip and at such an angle that the air current rebounding from the surface of the roll will act to throw the severed end of the lead strip down on to the conveying felt.—A. P.-C.

Paper Calendering Device. A. L. Dawe. U. S. pat. 1,679,711, Aug. 7, 1928. Mounted on the side frames of the calenders are brackets which pivotally support finishing rolls, so that the latter may be quickly and easily brought into contact with the paper passing through the calender. The finishing rolls are arranged so that they are brought into contact with both sides of the paper passing between them and the calendering rolls. The finishing rolls are rotated at a different circumferential speed from the calendering rolls, so that there will be a slipping or ironing action on the surface of the paper which tends to put a high gloss on the surface of the paper. The finishing-roll driving shaft is mounted at the center of the pivot, so that the roll may be quickly withdrawn even while the roll is rotating. Means are provided for adjusting the pressures between the finishing and calendering rolls, and these means may be arranged so as to lock the finishing rolls in any desired position.—A. P.-C.

Paper Machine Drives. J. White. Eng. pat. 289,938, Feb. 2, 1927, U. S. pat. 1,683,374, Sept. 4, 1928. In driving mechanism for a paper machine having an expanding pulley, separation of the pulley portions is resisted by thrust members, while the axial spacing is initially set by a screw and handwheel acting through a rod connected to a lever acting on two pins. The drive is started or stopped by a cam acting on a follower on a sleeve and under the control of a hand lever. The driving elements returning automatically to the original position on bringing the pulley into action after stoppage. The two half-pulleys, which are provided with bevelled rims, are respectively fast on a spindle and unitary with a sleeve feathered on the same spindle, the feathered half-pully being allowed to recede from the fast half-pulley when it is desired to arrest the spindle until the driving rope rests on the rim of an idle pulley revoluble on the boss of the fast half-pulley. In a modification for two ropes, a diaphragm having a double-bevelled rim and idle pulley are mounted on the sleeve on which one of the half-pulleys is freely mounted, two levers being connected to the control rod. Alternatively, the idle pulley has a double-bevelled rim and rope-receiving flanges on either side, while a form of pulley having a flexible grooved transmission element interposed between the driving rope and the bevelled rims may be used. The cam may be situated between two stops and adapted to move the half-pulley positively in both directions.—A. P.-C.

Advantages of Shear-Cut Slitting. Anon. Paper Mill 51, No. 51, 20, 24 (Dec. 22, 1928). An account of the satisfactory performance of three Langston slitters and rewinders installed at the mill of the Brownville Paper Co., Brownville, N. Y., in 1911, 1915 and 1923, respectively.—A. P.-C.

Guillotine Paper-Cutting Machines. John-Werk Grafische Maschinen-Akt.-Ges. Eng. pat. 295,987.—A bar for aligning and feeding to a cutting machine a pile of paper carries a thin metal extension upon which the pile rests. The surface of this extension in contact with the table is smooth to lessen friction, and the surface in contact with the bottom of the pile is rough.—A. P.-C.

Paper Machine Drive. Escher Wyss & Co. Fr. pat. 640,951. Each section of the paper machine is driven by a constant-speed electric motor (e.g., a single-phase or polyphase synchronous motor) through a differential gear. The speed ratios of the differential bars of all the sections can be altered simultaneously and to the same extent from a shaft extending the whole length of the machine (e.g. the shaft of the motor driving the constant speed section of the machine); and provision is made for adjusting each one of the differential gears independently to regulate the draw between the sections.—A. P.-C.

Gaskets and Packings. Reginald Trautschold. Paper Tr. J. 87, No. 21, 40-44 (Nov. 22, 1928).—A brief exposition of services for which particular care should be exercised in the selection of packings together with a general presentation of what classes of packings are readily obtainable and for what services they should be employed.—A. P.-C.

New Pump for Paper Stock. R. K. Annis. Fairbanks, Morse Co. Paper Mill 51, No. 46, 18, 35-36 (Nov. 17, 1928).—A description of the latest type of wood stock pump with a discussion of its merits.—A. P.-C.

Coordinating a Paper Mill's Demands for Steam and Power. J. C. Hayes and O. C. Callow. Power 68, 664-666 (1928). Power and light are supplied by a semi-automatic water turbine unit with a steam turbine generator in reserve. Pulverized coal fired boilers supply steam to this unit when required and to digesters and papermaking engines. Exhaust steam at 25 lbs. and live steam generated from wood refuse supplies the process demand.—C. J. W.

Wood Room Mill Waste Fuel. E. V. Ahara. Combustion Engrg. Corp., N. Y. Paper Tr. J. 87, No. 19, 61-65 (Nov. 8, 1928).—A discussion of the factors affecting the economical utilization of wood room waste as a fuel, showing the conditions required for efficient burning of various type of waste.—A. P.-C.

Sawmill Waste for Mfg. Pulp. W. B. Greeley. West Coast Lumbermen's Assn. Paper Mill 51, No. 46, 24-25 (Nov. 17, 1928). Paper Tr. J. 87, No. 25, 57-58 (Dec. 20, 1928).—A brief discussion of the possible use of sawmill waste as pulpwood on the Pacific Coast.—A. P.-C.

Problem of Burning Wood Waste. I. H. A. Hatfield. Pulp Paper Mag. Can. 26, 1811-1814 Dec. 20, 1928).—A brief discussion of the economic advantages gained by collecting and preparing pulpwood refuse and bark for boiler fuel, together with a review of the particular problems which are met in designing equipment for the preparation and burning of such refuse.—A. P.-C.

Modern Power Plant. Anon. World's Paper Tr. Rev. 90, 1066-1070. (Sept. 28, 1928). A brief description of the boiler house and power plant installed by Daniel Adamson & Co. at Chapel-en-le-Frith.—A. P.-C.

Steam and Power in Paper Mills. Anon. Paper Mill 51, No. 45, 20-24, 28 (Nov. 10, 1928).—A discussion of the importance of proper balance between fixed and operating costs in the selection of steam power producing plants.—A. P.-C.

Second Power Plant Installation. Anon. Paper Mill 51, No. 47, 26 (Nov. 24, 1928).—A brief description of the new automatically controlled powdered coal installation at the plant of the Fitchburg Paper Co., Fitchburg, Mass.—A. P.-C.

Advance in Stoker Practice. Reginald Trautschold. Paper Tr. J. 87, No. 23, 50-56 (Dec. 6, 1928).—An outline of refinements incorporated in modern stoker design, construction and operation, together with a few examples of profitable stoker installations.—A. P.-C.

Power, Light, Heat and Paper. Walter N. Polakov. Paper Industry 10, 1375-1381 (Nov. 1928).—A review of recent progress in modern power plant practice.—A. P.-C.

New Power Development at Brokaw, Wisconsin. Anon. Paper Industry 10, 1391-1395 (Nov. 1928).—A description of the new boiler house and hydro-electric plant of the Wausau Paper Mills Co.—A. P.-C.

Felt Washers. W. P. Feeney. U. S. pat. 1,682,496, Aug. 28, 1928.—An outer stationary tube extending across the width of the felt has a slit of suitable width directed towards the felt. Inside the stationary tube is a rotating tube having several series of perforations arranged in longitudinal rows, the holes in adjacent rows being slightly offset longitudinally with respect to one another. Cleaning fluid is pumped inside the rotating tube under a pressure of about 40 pounds per sq. in. Owing to the relatively

high pressure used, the outer tube is encircled with reinforcing rings. When the holes in the rotating tube register with the slot in the stationary tube, jets of liquid are emitted at a high velocity and impinge on the felt, and owing to their intermittent character they subject the felt to a beating as well as a cleaning action —A. P.-C.

Increasing the Capacity of a Mill's Power Plant. Anon. Paper Industry 10, 1395-1399 (Nov. 1928).—A description of the newly installed high-pressure boilers and turbines at the Covington mill of the West Virginia P. & P. Co.—A. P.-C.

Bergstrom's New Boiler Plant. Anon. Paper Industry 10, 1401-1402 (Nov. 1928).—A description of the new boiler plant recently installed by the Bergstrom Paper Co. at Neenah, Wis.—A. P.-C.

Iron in Paper Mill Water. Fred Grove-Palmer. Paper Maker & Brit. Paper Tr. J. 76, 491-492 (Nov. 1, 1928).—A brief discussion of the methods of eliminating iron from water for use in fine paper mills.—A. P.-C.

New Vertical Sheet Cutter for Paper Machines. A Vander Stichel. Papeterie 50, 1046 (Oct. 25, 1928). In order not to interfere with the operations of the machine crew the jet for cutting the sheet at the wire when a break occurs is mounted in an inclined position, the top being held at a point above the middle of the width of the machine, while the lower end is moved across the width of the wire along a guide by means of a spiral operated by a hand wheel.—A. P.-C.

Care of Rubber Rolls. Anon. Pulp Paper Mag. Can. 26, 1787 (Dec. 13, 1928).—Directions are given for the protection of rubber covered rolls.—A. P.-C.

Density and Crown of Press Rolls. William E. Brown, American Wringer Co. Paper Mill 51, No. 46, 16, 41, 43 (Nov. 17, 1928).—A discussion of the outstanding factors which should be considered in determining the crown and density of rubber-covered press rolls.—A. P.-C.

Improved Way to Handle Wet Broke. Anon. Pulp Paper Mag. Can. 26, 1780 (Dec. 13, 1928).—The press roll doctor (which is of Carpenter flexible stainless steel) may be set to automatically exert any desired constant pressure on the roll, and it is oscillated to avoid all likelihood of its grooving the face of the roll and to ensure perfect cleaning action. The saveall trays are replaced by a slotted pipe to which a thin blade is attached, the pipe being supported between the press housings so that the blade will rest lightly on the bottom roll about 10 inches from the nip, and it automatically carries the water from the sheet into this pipe and thence into the pit through a water leg on the side of the rear framework.—A. P.-C.

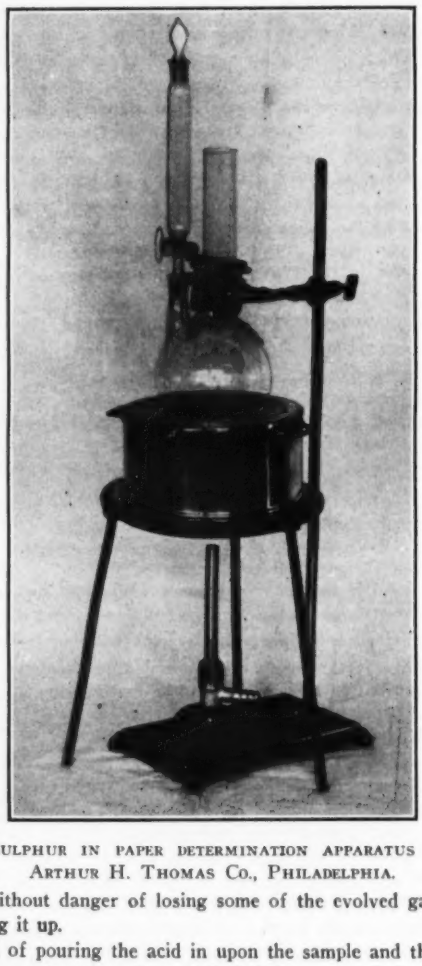
Paper, Cardboard and Pasteboard Making Machine. O. Leonhardt. U. S. pat. 1,689,553, Oct. 30, 1928.—In making paper, cardboard of pasteboard from several plies made on Fourdrinier wires and on cylinder machines, the several papermaking units are placed on the same plane and the several plies are successively couched off the forming elements by means of a single endless felt. Between the units the felt is passed over guide rolls covered with a water permeable surface, the wet sheet being in contact with the guide rolls.—A. P.-C.

Moisture Content of Felt Rags

Arrangements have been completed by the Bureau of Standards, Washington, D. C., for finding the moisture content of the various grades of rags used for making roofing felts and other similar products, at different humidities. This work is to be done in co-operation with the Technical Committee of the Felt Manufacturers Association and was undertaken at their request. They require the data to fix an equitable moisture-content basis for purchase specifications. The moisture content of fifty samples of rags will be determined at a constant temperature of 70° F. and at relative humidities of 50 per cent, 65 per cent and 98 per cent.

Anti-Tarnish Testing Apparatus

In using the official method of the Technical Association of the Pulp and Paper Industry for the qualitative determination of active sulphur in paper which is described on page 115 of Paper Testing Methods, R. H. Stevens, director of research of the Bogalusa Paper Company, Bogalusa, La., has designed an apparatus, shown in the illustration, that enables the chemist to introduce the paper sample without danger of losing some of the evolved gases when connecting it up.



ACTIVE SULPHUR IN PAPER DETERMINATION APPARATUS MADE BY ARTHUR H. THOMAS CO., PHILADELPHIA.

Instead of pouring the acid in upon the sample and then trying to clamp together the tube and flask before any of the gases can escape, the acid is added from the dropping funnel after the sample and zinc has been introduced into the flask and the apparatus assembled as shown.

Investigation of Postage Stamps

The study of resistant envelope papers has been continued. The object is to find, if possible, the factors that have the most important effects on the adhesion of stamp gum. Several thousand envelopes taken from the incoming mail have been examined and the most resistant types are being studied, particular attention being given fiber composition, surface finish, nature of sizing, and degree of sizing. Results indicate that the adhesion of stamp gum depends in no way on the fiber composition, but that it does depend on the nature of the sizing material, degree of sizing, and surface finish. All papers surface sized with starch sizing have been found extremely resistant. Nearly all of the other resistant papers found were high-finish bond papers having a high degree of rosin sizing. It is believed that these two types of paper are the principal offenders as regards the shedding of stamps.

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Control In Management*

By L. C. Reynolds[1]

This subject of control in management is one about which so much has been said and written that one would instinctively feel that there would be no new approach to the subject; and one would think that all industrial executives must understand what this means. On the contrary, many who devote their time to production do not understand the application of control and feel that it cannot be applied to their problems—that *their business is different.*

Those of you here, are interested not so much in the technical theories of control as in its practical application to industrial production management, and I will therefore devote most of the time to the latter.

It might be well to start with a definition of the subject as even that has not been understood. *Management* of an industry today is a collective term referring to *those who direct. Control* is defined in the dictionary as *that which guides.* Thus the subject of this address might be reworded as *That which guides those who direct industry.*

Therefore, Control is not management but is a part of management, and the controller is the executive in charge of that part of management. Controller is a quite modern word used to designate that executive whose duty it is to direct the financial affairs of a corporation. It is sometimes used interchangeably and sometimes erroneously with comptroller, an older word meaning originally the keeper of the counter rolls or in modern days the ledgers.

Restraint or Guidance?

In personal affairs, our pocket book is something like these ledgers. Knowledge of the condition of our pocket book should guide us in the conduct of our personal expenditures. Such knowledge might act as a restraint or a guidance of our desired actions, but no normal being would fail to use such knowledge, call it restraint or call it guidance.

We humans like our personal liberty but like our social relations more, and the more advanced our civilization—industry included—then the more complicated it becomes. Therefore this all gives rise to more and more controls. Laws, customs, precedents all control and limit our personal liberty if we so view the situation, but if we obtain a larger perspective we see the greater good to ourselves.

Control in management is a necessary outgrowth of the conduct of large industries where management has become plural. Being something new and not always understood, we can mistake it for *restraint which we resent* when it is really *guidance which we should welcome as a help.*

Efficiency Engineering

This subject is also confused with Efficiency Engineering with which so many have been familiar in the past two decades. Now efficiency might properly be the result of Control but it would be more intelligent and less obnoxious than that introduced without control. Efficiency shows *how* to do things and Control shows *what* things to do. We have had too much efficiency in places where control has been overlooked. Who hasn't at some time or other produced what turned out to be perfectly useless inventories, and yet produced them very efficiently at the greatest possible machine speed? Now, efficiency men may speed up everything in sight but it is not the speed with which we do such things that counts most, but rather *what we do.*

Controlling has four major financial problems to deal with continuously. They are, (1) *Capital,* (2) *Income,* (3) *Expenses,* and (4) *Profits.*

Control of Fixed Capital Expenditures

When we speak of fixed capital we have in mind the physical properties; land, building and equipment. When we speak of working capital we refer to that which is necessary for a working cash balance, that which is required for accommodation of our customers and that tied up in inventories of raw materials, supplies, work in process and finished materials.

From an operating viewpoint it is always easy to see the advantages of buying certain new equipment; but when the perspective is obtained of all the needs of capital, then our production advantages must stand in line with several other phases of the business, all saying together that they are each of the most importance. The supply of capital is not unlimited. Wise management will determine, at the beginning of each year, the amount which can be expended on capital outlays, and all requests must be sorted out and with the limiting total amount in view. This is a capital budget. To a controller these demands at times look like a host of soldiers storming the citadel. Here is a request for money to buy a piece of equipment that will apparently save the time of workmen when it really only will make it easier for them as it can only reduce a part of one human being; to justify this expenditure

* Address delivered before Connecticut Valley Division of American Pulp and Paper Mill Superintendents Association, November 16, 1929.

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would require some such solution as hiring a one armed man at half wages, in place of one whole man now on payroll. Another request is for equipment to make a better quality, incidentally increasing the cost; which latter, anyway, only concerns profits, and that is someone else's worry. Another request is for equipment to save waste, and how cheered up becomes the reviewer of this parade! Another is to replace worn out boilers or other equipment,—how very drab! Another is for added attachments or equipment to produce a new line,—and the production man mumbles this time, why don't customers stay contented and why don't the Sales Department sell the capacity for which we are equipped before going after something new? Here is another that will save money by producing more per hour, while it really is nothing but increasing the capacity which is already too large and will mean idle time and in the end not the savings expected. This is one of the chief reasons why industry today is overexpanded. Here is another request, from the sales division this time, that we increase our capacity for a certain line so as to take care of one or two peak loads a year, but that will increase fixed and operating costs for an increase of income not commensurate. Here is a capital request that will pay for itself in six months and here is one that will pay for itself in six years. And so on, indefinitely it seems. After all other considerations the head of the company must pass on capital outlays after considering the trend of the market on the line of production affected and great many other policies as to sales as well as financing. So why doesn't the financial executive approve all of these at once? Let us not forget that money expended on plant is tied up forever.

Control of Working Capital Uses

Now, as to working capital there is a different viewpoint, but none the less serious. Here we have a cash balance and perhaps liquid securities. How necessary they are to take the bumps of business which bumps control can only partially iron out. A cash balance varies through the year and therefore we must keep a forecast for a year ahead, month by month.

Inventories Control

Inasmuch as the inventory, previously described, uses up working capital, we must needs control this inventory. The purchasing agent can't always buy five years' supply just because he has a bargain; and the production executive can't make double the quantity required because the cost per pound will be lower. We all know that the chief reasons for raw material inventory are so as to take care of the fluctuations in supply to us due to price advantage, transportation, etc.; and so as to take care of the fluctuations in the demands of our production. Any more than is required for those purposes is capital tied up for which we must earn a profit for dividends or, if borrowed, on which we must pay interest, or if not borrowed, on which we lose interest. The chief reasons for finished inventory is to care for fluctuations in demand of sales and so as to smooth out production load. The first reason sets the maximum limits we can carry and any production beyond those limits is like the shopper who buys something not wanted because it is a bargain. Under the second heading we have two important considerations. One is to so plan the inventory control and the resulting production orders that the production will go continuously throughout the year, building up large inventories in the slack season so as to take care of the rush season when inventories will be depleted somewhat. This steady running makes for more contented personnel and a remarkable lowering in costs, and obviously a smaller amount of fixed capital requirements. The economical size of production orders must next be considered in this whole scheme but must always be limited by the usage or sale in every case. Nothing is cheap, no matter what the efficiency, if it is something we don't want. Another thing to be remembered is, that each year we keep a given lot of material, adds 10 per cent to its original cost, as this is the approximate interest and carrying charges. Carry it five years and you add 50 per cent to its cost. A minimum sales order is something resulting from sales policy determined by a great many factors, including the production cost; but once the order is taken it is our duty to organize and equip to make that much and no more than sound business control will warrant. I have known of inventories with a one month turnover in total, but with items requiring as long as ten years to turn. And such conditions have often been excused with the statement that the quantity on hand is caused by requirements of the minimum economical production order.

On this same basis we might buy carlots of all our supplies. How would it look to have a carload of a certain size of bolts and nuts to arrive at your door, because it made the price of the one desired bolt and nut much cheaper? Supply inventory must be watched and so must work in process. The latter is easily controlled if we have due dates for all production orders, both for stock as well as for sales; as then nothing on the floor ever stands around for long. Of course, one of the great tools in inventory control is the perpetual record; and back of this a perpetual inventory. This latter consists of a system whereby a certain number of items are inventoried every day and checked with the card record which is corrected if necessary. If it is desired to cover every item once a month, then we divide the total number of items by the working days in the month and arrive at the number to be inventoried per day. Large corporations have an inventory crew who do nothing else. By such a method, even the yearly inventory is abandoned and inventory cost is lower and more accurate at all times. This is called perpetual inventory and the cards are called perpetual inventory records. The two must not be confused.

Control of Income

The control of income is the most modern thing in the management of business. More voluminous data is required in this case than for production control and an uncanny judgment of market trends is required which takes all the resources of the highest executive of the corporation. But a start or sales forecast must be made before the control just described for inventory is even possible and without sales forecast the purchasing and production must flounder about obeying every whim of a widely fluctuating sales outlet.

Sales Forecast

A foremost banker in New York, who has had the care of a number of reorganized industries, says that forecasting and planning are the essence of modern-day business management, and are vital to industrial prosperity. That they are not the functions of an individual or a department. That they are the conscious, cooperative work of an organization. That forecasting and planning are nothing more or less than a system of control whereby production, purchase of materials, and the employment of capital are coordinated with sales requirements. That flexibility is a prime requisite so that there may be a quick response, and thus the possibility of adjustment throughout the system to the requirements of changes of situation that are inevitable. That the focal point of the system is the sales outlet, and the *flow at this point must be gauged, and every other activity must be coordinated with it.*

This is the core of modern control and is what it means when we say control in management or that which guides those who direct an industry. Some say,—But our business is different and anyway conditions change so rapidly that any control or budget will be so greatly at variance with the actual results as to make it valueless. But even if there are violent fluctuations, how much more quickly they can be noticed and changes in policies and plans made to conform with requirements. Fluctuations and all the regular arguments are reasons for controls and budgets—not reasons against. The first year will naturally not give results as close to expectations as would be the case if we had proper data to start with, but this data soon accumulates and each succeeding year becomes more accurate in its forecasts. Perfection the first

year is not possible but the important thing is to make a start and have improvements follow.

Control of Expenses

The first result is sales quotas for district offices and salesmen. Something by which to measure their value and a bogie for them to shoot at. I won't dwell on this subject as the interest of this meeting is in manufacturing phases. Nor will we stop to consider the way in which a control operates as to administration, selling and advertising expenses; some of which are a matter of wide and long range policy spending money for a distant future, but going into present costs. But having made a real sales forecast and set up means to make it a reality,—we can intelligently proceed with control of our manufacture. From the sales forecast we obtain manufacturing quotas, material requirements, labor requirements, and plant requirements.

Active and Idle Plant

Knowing our manufacturing quotas by lines of product, we can determine just how much capacity we need. If this will not use all our capacity, then some equipment must be idle. Now, here is an important point to remember at this time, namely: that it is always cheaper to run one unit full time, with a second shut down, than to run two units half time. Of course, the latter plan is more convenient for the production force and makes it convenient for the sales force to handle peak loads; but business gained at such a cost is never warranted; and further our abilities as managers must be used in smoothing out production if we are to live in this day and age. The large corporations apply the principle of shutting down equipment and only operating what they can run on full time. Such floor space is segregated and locked up and carried as idle plant at a minimum charge. I know of one large industry that closed a plant of 3,000 employees and consolidated the work in another plant 500 miles away so as to cut operating expenses during a period of depression.

It is apparent, from the foregoing, that a control system can't be operated without first allocating the manufacturing quotas; and once this is done, there should be no changes unless such are made through the control system. Likewise, new lines added must follow the same procedure, or else the whole basis of controls is upset, as will be seen later.

Standard Specifications for Manufacture

No production control is possible without standard specifications by which to manufacture, that is at least standards for use of materials or what a paper mill might call a *standard furnish*. Now, a paper man will smile as he considers all the variations in materials used and say it is impossible. But the metals industries have been using such for years. Then the reply is that their materials don't vary so much and are simple. Well—I have heard a paper man say that a piece of steel is—well—just a piece of steel, so simple. And I have heard a man versed in steel manufacture say the same about paper. Having been in both and other activities, I can say that the variations and complexities of paper materials are really small compared with some industries. In fact, the paper mill purchasing agent has far less items to purchase than a similar sized metal working factory. There is as wide a difference in equipment, materials and method between a high grade alloy steel mill and a carbon steel mill, as there is between an all rag bond paper mill and a news print mill. We must adopt the good features of the newer industries, and standards is one of those good features.

Material Quotas

How often have you seen a paper mill purchasing agent contracting for a given lot of material based on last year's usage. The past is behind us and we are interested in the present and the future. Purchases should be based on forecast of the future and not on what we did last year. But a forecast can not be made without first the sales forecast, second the manufacturing quotas, and third the standard furnishes. With this information we can work up quite an accurate schedule of raw materials requirements. The regular inflow of these requirements assures always having on hand the proper kind of materials so that the furnish doesn't have to be varied so much. It also enables the purchasing agent to buy at better prices. In the end, it works for better quality and uniformity of product as well as cheaper costs. It reduces the amount of working capital tied up in raw material inventory, to that required and avoids any chance of accumulating materials for lines of product which might become obsolete.

Standard Payrolls

Once we have allocated our manufacturing quotas, it becomes easy to set up a list of employees and rates; in other words, a standard payroll for regular operation. This is then a list of human beings, who, working full time, will produce the quotas we have set up from our sales forecast. Such a force working full time, or as near to it as the accuracy of our forecast, will have larger income per person, will be more contented, more efficient, and make for better quality and uniformity of product. If to this we get the efficiency engineer to apply a wage incentive system, we have even better conditions. Whether we have a standard payroll alone or with wage incentives, we can figure out standard production rates which can be relied upon in making up forecasts of expenses and cost estimates.

Standard Overhead Budgets

We now take up the control of overhead, which is the only part of manufacturing expenses which is hard to control. It requires real cooperation on the part of executives, superintendents and foremen. Parts of the overhead are fixed throughout the year regardless of sales and production, but other parts can be varied. Supplies is always an item which it is hard to get watched; power is wasted almost everywhere; and maintenance is something which has no limit unless one is set and rigidly adhered to. If one were to start maintaining anything, from mill equipment to his own residence, he would find that there are always places money could be spent regardless of how much had already been done. But judgment must be used in finding a stopping off place. If bogies are set for each of the items of overhead, such bogies variable with production, we can get a comparison with performance in the form of monthly reports which will guide us as we go along in our commitments throughout the months.

Standard Costs

Much has been said and written on the subject of standard costs, during recent years, and it is still a hazy subject with many operating executives. A standard cost consists of three elements, namely: materials, labor, and overhead. If we have a standard furnish we can easily figure a standard cost of same. If we have a standard payroll and resulting figures for production rates, we then have the standard cost of labor for each item of our costs. And if we have regular bogies for our overhead items, then we have a standard overhead expense for the manufacturing quotas, which proportioned by whatever method, gives us a standard overhead for each item of our costs. Adding these three, materials, labor and overhead standard costs, together, gives us a standard cost for any unit of production. It is the cost which we would have if the standard materials were used and if the payroll operated no more than the force set up and if the mill ran on the manufacturing quotas with an overhead exactly as set up and not exceeded. In other words, our standard cost will be our bogie cost. We can compare actual costs with these standards and find out why we have a difference. Certainly, if we set our standards up correctly, a variance will mean that something happened, and we ought to know what did happen. This is a function of control, namely, to report variations of actual with standard costs immediately after each run and tell where it varied, calling for an explanation from the production head. Sometimes the explanation proves the standard is in error, and it simply helps get the standards nearer to perfection. But, more often it shows up occurrences

which the production head is glad to know about and which he desires to correct.

Control of Profits

We now come to a discussion of control of the most important phase of business, namely, profits. We cannot exist for long without this important account. Of course income less expenses equals profits. Therefore, the important thing is to see that the standards and controls set up for expenses is less than the income represented by the sales forecast by an amount we feel we must earn as profits. If we have an intelligent sales forecast and make good and then obey all the controls we set up for expenses, that is, have our actual costs never more than the standard costs, then we must have left the profits we expected. This very plan so briefly stated, is the reason for success of some of our largest corporations today, where budgets and controls are serious matters requiring even resignations if persistently violated. As one noted industrial leader recently said,—"Profits can be assured. The process is so simple that it is at first hard to believe, but I state it in all seriousness. The profit of *any* business, large or small, can be assured by insisting that cash outgo be less than cash income." In fact, keep within controls and you can figure the profits ahead of time. Which formula would you use?—Income minus Expense equals Profit or Loss, or The formula—Income minus Profits equals Allowable Expense.

In Conclusion

That part of management represented by supervision, the superintendents and foremen, can profit most by the use of controls as a guidance and help and they should find it one of the best of modern tools. One often finds successful supervisors keeping a kind of books in their own fashion so as to know how much they are spending on such things as supplies from day to day. These men know ahead of time, from these books of commitments, what the statement from the accounting room will look like. These men know their payroll list from day to day and know just how their materials are being used or misused. These observations are not made from theoretical knowledge but from actual experience in various industrial activities successively as engineer, superintendent, and manager. Knowledge is power—and modern control furnishes to the management financial and statistical data of the past, present and future which gives them the basis for that knowledge with which to guide their present and future actions.

Taxes and Corporations

By Thomas J. Burke, C. A.

The present is a desirable time to draw the attention of corporations in the pulp and paper industry, to the fact that a revision of the Federal Income Tax Act will probably be made next year. The corporation income tax rate now stands at 12 per cent, to which it was reduced by the Revenue Act of 1928, which compares with a rate paid by others doing business not in corporate form at 5 per cent. There is no justification for this big disparity in rates, and it is only necessary to draw attention to the fact that from 1913 until 1916, and from 1918 to 1921 there was no difference between the rate paid by corporations and others to prove that Congress originally did not intend that corporations should be penalized in this manner.

Corporation Rate Still at 12 Per Cent

However, the Revenue Act of 1921 and successive acts have reduced the rate for individuals, and partnerships, from 12 per cent to 5 per cent, while the corporation rate still stands at 12 per cent, as it did in the high tax year, 1918.

The Chamber of Commerce of the U. S., made a strong effort prior to the passing of the 1928 Act, to have the corporation tax rate reduced to 10 per cent. Stating that any such reduction would result in a deficit, the Treasury officials opposed this reduction, although subsequent events have proved that this reduction would have been fully justified, and would not have resulted in a deficit. In fact, there was a treasury surplus of nearly two hundred million dollars at the end of the Government's fiscal year, June 30, 1929.

Treasury Making Estimates for 1930

The Treasury Department is now making up its estimates for 1930, which will be presented to Congress during the December session. Naturally special interests are now busy working for special reductions in certain industries, whereas ,it would seem to be fairer and more reasonable for all concerned, if every industry were to receive part of the benefit, which would be derived from a reduction in the corporation income taxe rate. Such a reduction would undoubtedly prove a stimulus to industry, very much needed at this time, following the present debacle in the stock market. The benefit would be more wide spread, and it is undoubtedly unfair that corporations should pay such a high income tax rate in comparison with others.

Dividends Would Be Larger

There are millions of stockholders in corporations in this country, and the taxes paid by the corporations are in reality paid by these individual stockholders, since if the tax rate were reduced, the balance available for dividends would be relatively larger. While it is true that the stockholder is allowed to deduct the amount received as dividends when determining what normal tax he shall pay, yet, when figuring the amount of surtax payable, he must include the total amount of net income including his dividends. He does not pay the normal tax on the dividends, from which however, has been deducted the 12 per cent paid by the corporation. There is no reason why the Federal Government should tax corporations as such, because a corporation does not derive rights or advantages which are not given to the competitors of corporations, conducting their business as individuals or partnerships. Corporation charters are received from State Governments and not from the Federal Government.

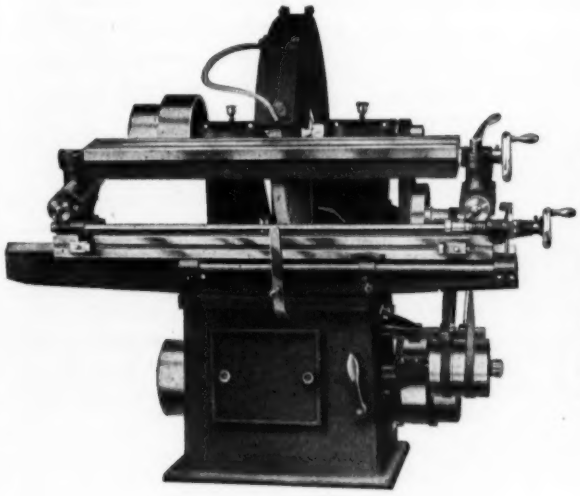
Concerted Efforts Should Be Made

The suggestion is made therefore, that our industry make a concerted effort to bring about a reduction in the corporation income tax rate. As to whether such action should be handled individually by the different corporations within the industry by writing to their senators and congressmen, or whether it is a matter that should be handled through the American Paper and Pulp Association, as the central organization, or the U. S. Chamber of Commerce, as representing industry in general, is a matter that must be left to the leaders of our industry to decide.

One thing is sure, facts prove that the corporations of the country will be fully justified in fighting for a reduction to at least 10 per cent in the corporation income tax rate. Treasury surpluses have been used to the extent of millions of dollars in the reduction of the national debt, in addition to approximately half a billion dollars provided annually in the government estimates, for the orderly reduction of this debt.

Now Is the Time to Bring About Reduction

The question is raised, as to why corporations as a class, should be mulcted to pay an excessive share of this debt. There are hundreds of thousands of people in this country owning a few shares of stock, who indirectly are paying income tax at the rate of 12 per cent on their investment. This is absolutely unfair and unjustified, and if a concerted effort is to be made to rectify this unfair situation, now is the time to take action to bring about this reduction, which as stated before, would undoubtedly prove helpful in counteracting the adverse effect the disastrous stock exchange slump is likely to have on business.



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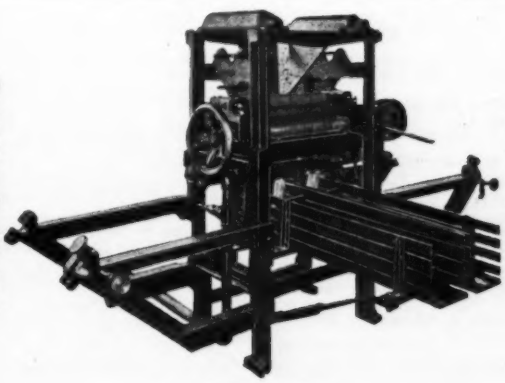

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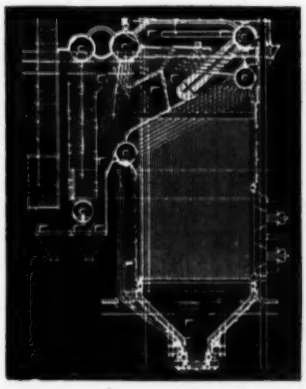

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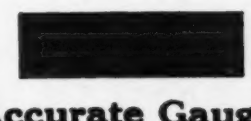


Old Plates Reclosed and Re-cut to Accurate Gauge
Rolled Phosphor Bronze and Copper Plates for Rotary Screens
Sole Manufacturers of the Union Witham Screen Plate Vat and Fastener

Imports of Paper and Paper Stock

(*Continued from page 66*)

Atterbury Bros., Inc., Browning, B. Ayres, 834 bags.
T. M. Duche & Sons, Vauban, B. Ayres, 417 bags.
A. Hurst & Co., Rochambeau, Havre, 27 bags.

WOOD PULP

Castle & Overton, Inc., Rheinland, Hamburg, 1,048 bls. wood pulp, 157 tons.
——, Rheinland, Hamburg, 210 bls. wood pulp, 42 tons.
Bulkley, Dunton & Co., Sparreholm, ——, 600 bls. wood pulp.
Perkins, Goodwin & Co., Sparreholm, Gothenburg, 127 bls. sulphite.
——, Maize, Hernosand, 1,710 bls. sulphite, 285 tons.
Pagel Horton & Co., Inc., Maize, Munksund, 1,200 bls. sulphate, 200 tons.
J. Andersen & Co., Maize, ——, 2,625 bls. wood pulp, 525 tons.
Bulkley, Dunton & Co., Maize, ——, 4,846 bls. wood pulp, 969 tons.
J. Andersen & Co., Norefjord, Oslo, 2,160 bls. sulphite.
O. E. Kiaer, Norefjord, Oslo, 250 bls. sulphite.
J. Andersen & Co., Norefjord, Sarpsborg, 1,200 bls. sulphite.
Acer McLernon Co., Ltd., Dago, Chandler, 1,483 tons wood pulp.
Stora Kopperberg Corp., Kelkheim, Skutskar, 925 bls. wood pulp.
Scandinavian Pulp Agency, Inc., Kelkheim, Skutskar, 1,000 bls. wood pulp.
M. Gottesman & Co., Inc., Kelkheim, Iggesund, 875 bls. sulphite, 175 tons.
——, Kelkheim, Iggesund, 1,000 bls. sulphate, 200 tons.
——, Kelkheim, Hernosand, 12,750 bls. wood pulp, 1,125 tons.
A. P. W. Paper Co., Gunny, ——, 10,396 bls. wood pulp.
E. J. Keller Co., Inc., Cape Town Maru, ——, 336 bls. wood pulp, 50 tons.
J. Andersen & Co., Cape Town Maru, Hamburg, 300 bls. wood pulp, 60 tons.

WOOD FLOUR

B. L. Soberski, Norefjord, Frederickstad, 3,000 bags.
Corn Exchange Bank, Norefjord, Flekkefjord, 1,000 bags.
State Chemical Co., Innoko, Rotterdam, 540 bags, 30,630 ks.
State Chemical Co., Statendam, Rotterdam, 500 bags.
A. Kramer & Co., Statendam, Rotterdam, 300 bags.

PHILADELPHIA IMPORTS

WEEK ENDING NOVEMBER 16, 1929

National City Bank, Norefjord, Oslo, 600 bls. sulphite.
——, Norefjord, Oslo, 500 bls. wood pulp.
Chemical Bank & Trust Co., Norefjord, Tofte, 3,150 bls. sulphite.
Atterbury Bros., Inc., Norefjord, Tofte, 600 bls. sulphite.
Brown Bros. & Co., Oregon, Havre, 42 bls. rags.
Pan American Wallpaper & Paint Co., London Corp., London, 9 bls. wall paper.
Baring Bros. & Co., London Corp., London, 37 bls. rags.
Castle & Overton, Inc., London Corp., Dundee, 180 bls. rags.
Liberty National Bank, Excellency, Marseilles, 115 bls. rags.
V. Galaup, Excellency, Genoa, 124 bls. rags.
Congoleum Nairn Co., Excellency, Genoa, 339 bls. rags.
Phila. National Bank, Excellency, Leghorn, 30 bls. rags.
Congoleum Nairn Co., Excellency, Leghorn, 544 bls. rags.
J. A. Steer & Co., Boston City, Bristol, 65 coils old rope.
E. J. Keller Co., Inc., Hagen, ——, 45 bls. rags.

BOSTON IMPORTS

WEEK ENDING NOVEMBER 16, 1929

G. F. Malcolm & Co., Laconia, Liverpool, 18 cs. carbonizing tissue.
F. S. Webster & Co., Laconia, Liverpool, 6 cs. carbonizing tissue.
——, Laconia, Liverpool, 3 cs. condenser tissue.
Brown Bros. & Co., Marengo, Hull, 438 coils old rope; 93 bls. yarn.
D. E. Cummings & Co., Marengo, Hull, 12 bls. rags.
Sherwin Sheppard Co., Marengo, Hull, 33 bls. rags.
Bulkley, Dunton & Co., Lorain, ——, 250 bls. wood pulp.
Bulkley, Dunton & Co., Eifel, ——, 336 bls. wood pulp.

NEWPORT NEWS IMPORTS

WEEK ENDING NOVEMBER 16, 1929

Stora Kopperberg Corp., Kelkheim, Skutskar, 1,000 bls. wood pulp.
——, Kelkheim, Hernosand, 2,550 bls. sulphate, 425 tons.
M. Gottesman & Co., Inc., Kelkheim, Iggesund, 2,250 bls. sulphite, 450 tons.

NORFOLK IMPORTS

WEEK ENDING NOVEMBER 16, 1929

British American Tobacco Co., Ala, Antwerp, 39 cs. cigarette paper.

BALTIMORE IMPORTS

WEEK ENDING NOVEMBER 16, 1929

National City Bank, Exmouth, Piraeus, 340 bls. rags.
E. M. Sergeant & Co., Maize, Hernosand, 1,800 bls. sulphite, 300 tons.
J. Andersen & Co., Maize, Hernosand, 5,250 bls. sulphite, 875 tons.
Pagel, Horton & Co., Inc., Maize, Hernosand, 1,500 bls. sulphite, 250 tons.
Bulkley, Dunton & Co., Maize, ——, 4,425 bls. wood pulp, 825 tons.
Pagel Horton & Co., Inc., Maize, Munksund, 2,550 bls. sulphate, 425 tons.
J. Andersen & Co., Maize, Soderham, 1,200 bls. sulphate, 240 tons; 250 bls. sulphite, 50 tons.
G. M. Graves Co., West Alsek, Dublin, 56 bls. bagging.
Schapira & Son, Liberty, Dunkirk, 102 bls. rags.
Congoleum Nairn Co., Liberty, Dunkirk, 319 bls. rags.
Katzenstein & Keene, Inc., Liberty, Dunkirk, 257 bls. rags.
Congoleum Nairn Co., Ala, Antwerp, 1,140 bls. rags.
Scher Bros. Co., Ala, Antwerp, 92 bls. rags.
W. Steck & Co., Ala, Antwerp, 157 bls. jute card waste.
Katzenstein & Keene, Inc., Ala, Antwerp, 336 bls. rags.
W. H. Masson, Ala, Antwerp, 89 bls. old rope.
Castle & Overton, Inc., Ala, Rotterdam, 340 bls. wood pulp, 54 tons.
National City Bank, Ala, Rotterdam, 163 bls. rags.
Congoleum Nairn Co., Ala, Rotterdam, 78 bls. rags.
——, Kelkheim, Hernosand, 3,750 bls. wood pulp, 625 tons.
M. Gottesman & Co., Inc., Kelkheim, Iggesund, 5,700 bls. wood pulp, 1,140 tons.
——, Kelkheim, Iggesund, 4,125 bls. wood pulp, 825 tons.
Bulkley, Dunton & Co., Mexicano, ——, 450 bls. wood pulp.

Paper Exports Expanding

WASHINGTON, D. C., November 20, 1929.—Expansion of production marked the paper industry last year, and exports of practically all lines made greater gains than in any twelve month since the war, says O. Hopkins, Acting Director of the Bureau of Foreign and Domestic Commerce in his annual report to the Secretary of Commerce, commenting on the work of the Paper Divisin of the Bureau. He continues: The movement toward cartellization is encountered in the paper industry of Europe; and steps have been taken by producers in this country to reach an agreement regarding foreign markets with members of the European industrial group.

Manufacturers of paper and paper board, and of printing machinery and supplies as well, were actively assisted by the paper division of the bureau in finding outlets for their products abroad and were kept informed of changes in foreign economic and trade conditions. Inquiries relating to export markets answered during the year through Washington and the district offices numbered 34,970, or nearly 30 per cent more than in 1927-28. While this increase was spread fairly well over the entire group of products, perhaps the greatest proportionate gain was in inquiries concerning markets abroad for specialty goods and in connection with domestic distribution.

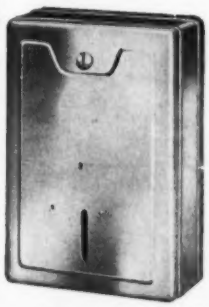
The limited personnel of the division makes it desirable to foster cooperation with industry through the medium of trade associations, but it has been handicapped in extending assistance to the printing equipment branch by lack of an active organization there, necessitating the establishment of contact with trade publications and individual manufacturers. The division was able, however, to help several printing equipment concerns in placing agencies overseas.

Besides articles appearing in Commerce Reports, items of special interest to the trade were published in the division's Weekly News Release, and a revised edition of the Glossary of Paper Terms and Instructions to Exporters was issued. Trade information bulletins covering New Zealand, Australia, the Near East, and part of Europe are planned for publication during the next half year.

The new office recently opened by the bureau at Oslo, Norway, has contributed much valuable material to the division's file of information on the paper industry of northern Europe. Already the commercial attache has established contacts with European trade associations that will be of practical advantage to the bureau.

To Build Largest Board Mill in Europe

WASHINGTON, D. C., November 20, 1929.—The new all board mill, to be erected for the Mo and Domsjo Company, in the Ornskoldsvik district, Sweden, will be the largest establishment of its kind in Europe, according to a report to the Department of Commerce. The raw material for the mill will be obtained from the Domsjo sawmill across the Mo river, belonging to the same concern. Interest in the production of building boards with heat and sound insulation properties has increased enormously in Sweden, a large mill for manufacture of wall board from American patents having just been completed for another company.



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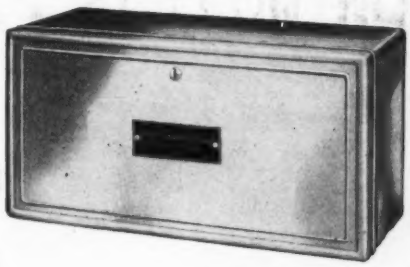

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New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, November 20, 1929.

There was a moderate amount of trading going on in the local paper market during the past week, for both future and immediate delivery. Over production and over stocking are both being reduced, with a consequent strengthening of the general price undertone. Quotations stay firm at approximately the same level as that of last week on almost all grades of paper.

The production of news print continues strong, with the total weighted output in Canada and the United States showing about 86 per cent of capacity. Shipments of news print are running along steadily as usual.

Demand for paper boards continues in seasonal quantity, but no improvement is noted in price. The fine paper market is holding closely to schedule, and the movement into consumption goes on in good volume. Conditions in the coarse paper field are practically unchanged, with wrapping paper being shipped in seasonal amounts. Tissues are also going forward in fair quantities.

Mechanical Pulp

The comparative scarcity of ground wood available both in this country and abroad has given a steady tone to prices on this commodity. Very little talk of concessions is heard, and shipments are going forward at a reasonable rate.

Chemical Pulp

The chemical pulp market remains fairly active, with orders for both domestic and foreign pulp being placed well ahead by many concerns. Firm prices characterize the market this week, especially for easy bleaching and strong unbleached grades of sulphite pulp, which show improved demand. Request for bleached sulphite is slightly off.

Old Rope and Bagging

There is a good demand for domestic and imported old manila rope, while scrap and roofing bagging are also in fair request. Foreign Gunny No. 1 is slightly lower. It is now going for from $1.50 to $1.60, while domestic grades are quoted at about $1.60 to $1.70. No. 1 scrap is still moving at a seasonal pace.

Rags

The paper mills' interest in rags continues to improve, and a slight reduction is noted in foreign rags, new white cuttings, which are now quoted at from 10.00 to 10.50. Cotton cuttings are moving into consumption fairly well. Spot offerings are somewhat limited. New shopperies are priced at from 1.50 to 1.55.

Waste Paper

Better grades of waste paper rule steady and practically unchanged, with a few reductions. On old kraft machine compressed bales the price is from 1.65 to 1.75. Strictly overissue news goes for .65 to .70. Strictly folded is quoted at .55 to .60, and common paper from .20 to .25.

Twine

The twine market shows moderate activity. There is little shading of price, and general adherence to schedule on shipments is noted. Spot orders for the Christmas season are still being filled in fair quantities.

Big Shipment of Pulp Arrives at Albany

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., November 18, 1929.—Two Norwegian owned ocean steamships carrying wood pulp to the plant of the A. P. W. Paper Company docked at the Albany Port Terminal during the past week. The first to arrive was the Gunny, carrying approximately 2,250 tons, and incidentally marked the docking of the twelfth ocean freighter here during the year. The big steamer was held up over night at Athens because of fog and the pilot decided not to navigate the channel through darkness past the several dredges working in the river. The Daga carried about 1,550 tons of pulp and a little difficulty was experienced in docking both ships at the local terminal.

W. A. Hallenbeck, contract pilot for the paper company, met both ships in New York City and supervised the voyage up the Hudson River. So far this year 20,700 tons of pulp have been received over the water route by the A. P. W. Paper Company from the Nova Scotia plant and it is planned to bring several more before the season closes. D. G. Kibbey, traffic manager, is attending to all details in connection with the shipping arrangements and it is indicated that shipments this year will be just double the previous record mark of last season.

NEWS PRINT PRICES DISCUSSED

(Continued from page 23)

column of the plans now being put into execution for the building of a 1,000-ton news print mill by the Powell River Company, following on the authority given that company to utilize power on the Lois River.

Then the Pacific Mills, subsidiary of the Crown Willamette Pulp and Paper Company, is going ahead with a $1,500,000 building program. It has also made an arrangement with the British Columbia Power Corporation which will enable it to establish another mill on Vancouver Island, and it is reported that that mill will have an ultimate capacity of 1,000 tons.

The British Columbia Pulp and Paper Corporation, which took over the Whalen Pulp and Paper Mills, is now operating on a sound basis, building up a good market both in Canada and Japan.

More than a million dollars are now being spent in improvements designed to modernize the plant of the Vancouver kraft mills at Port Mellon.

Frank P. Jones, a well known Montreal financier, is understood to be interested in a plan to establish a mill at Prince George, while the International Paper Company is said to be planning to enter the news print field in British Columbia, this company having taken an option, it is said, on the property of the Canadian Forest Products, Ltd., at Beaver Cove, Vancouver Island. The previous owners, the International Harvester interests, planned to establish a 1,000-ton mill at Beaver Cove, and received permission to go ahead with a water power development at Nimpkish River in connection with the project.

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WARREN IMPROVED PATENT DOUBLE DRUM WINDERS

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PAPER MILL MACHINERY

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Revolving Paper Cutters—Rag Cutters—Cylinder Paper Machines—Washing and Beating Engines—Chilled Iron and Paper Calenders—Fan and Stuff Pumps—Engine Roll Bars and Bed Plates—
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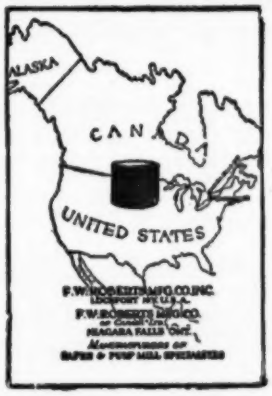
B U R R S



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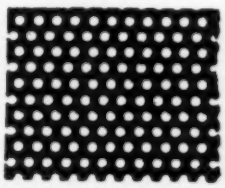

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Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, November 20, 1929.

BLANC FIXE.—No unusual developments have taken place in the blanc fixe market. Pulp and powder are both in approximately normal demand. There has been no change in prices. The powder is selling at from 3¼ cents to 4½ cents per pound, in barrels, with the pulp quoted at from $42.50 to $45.00 per ton in bulk.

BLEACHING POWDER.—A prevalent tone of steadiness rules the bleaching powder market. Contract shipments continue to go forward in regular quantities at a good pace. The quotations on bleaching powder are $2.00 to $2.35 per 100 pounds, in large drums, at works.

CASEIN.—The casein market remains practically unchanged in demand and price, with Argentine standard ground at from 16 cents to 16¼ cents, finely ground at from 16½ to 17 cents per pound, and domestic casein at from 15½ to 17 cents per pound, all in bags, car lot quantities. A firmer undertone is noted.

CAUSTIC SODA.—Renewals of contract for 1930 delivery were made in some volume during the last week. The price which has held for the past year is continued for the coming year. Seasonal shipments are going forward, and solid caustic soda is quoted at from $2.90 to $2.95, with the ground and flake at from $3.30 to $3.35 per 100 pounds, in large drums, at works.

CHINA CLAY.—The market for china clay is still fairly active. Withdrawals against contract are taking place at a good rate. Quotations on domestic paper making clay are from $8 to $13 per ton, at mine, while imported varieties sell at from $15 to $25 per ton, ship side.

CHLORINE.—Additional contracts for 1930 deliveries at the price level recently obtaining were made this week in the chlorine market. Spot quotations hold at from 3¼ cents to 3½ cents per pound, with standard contracts being made at $2.85 per 100 pounds, in tanks, or multi-unit cars, at works.

ROSIN.—Some slight fluctuations were noted in the rosin market this week, mainly in shading of Northern quotations. There was a fair demand for moderate quantities, with grades of gum rosin used for paper making quoted at about $9.20 per 280 pounds, in barrels, on dock. Wood rosin goes for from $7.00 to $8.05 per 280 pounds, in barrels, at Southern shipping points according to grade and quantity.

SALT CAKE.—The scarcity of salt cake offerings continues, with the price situation strong. Prices for salt cake are from $18 to $21 per ton, with chrome salt cake quotations at from $15 to $16 per ton, in bulk, at works.

SODA ASH.—Increased shipments were going forward in the soda ash market, and it was announced that no change in contract price would take place for 1930. Soda ash in car lots, at works, is quoted on contract at $1.32½ in bags, $1.55 in barrels.

STARCH.—The demand from the mills for starch is persistent, and the price remains at $3.92 per 100 pounds, in bags, $4.19 per 100 pounds in barrels, at works.

SULPHATE OF ALUMINA.—The market for sulphite of alumina is consistently firm, with shipments against contract progressing at a normal pace. Iron free sulphate is quoted at $1.90 to $2.05 per 100 pounds, with commercial sulphate at $1.40 to $1.55, in bags, at works.

SULPHUR.—The position of the sulphur market is about normal, with prices holding to schedule. Yearly contract quotations are $18 per ton, at mine, in lots of 1,000 tons or over, and $20 per ton in smaller quantities. Spot and near by car loads are still quoted at $21 per ton.

TALC.—Conditions in the talc market are satisfactory. Shipments to the mills are proceeding in good volume. Domestic talc is priced at from $16 to $18 per ton, in bulk, at Eastern mines, with imported talc at from $18 to $20 per ton, in bags, ship side.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@53.25
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine sized	8.00	@11.00
Book, Cased—		
S. & S. C.	6.00	@ 7.50
M. F.	5.75	@ 7.00
Coated and Enamel	7.50	@12.00
Lithograph	7.50	@12.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.35	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .80
Kraft	1.00	@ 1.10
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	6.25	@ 6.50
No. 2 Domestic	5.25	@ 5.50
Southern	4.25	@ 4.50
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

(Delivered New York)

News, per ton—		
Rolls, contract	62.00	@ —
Rolls, spot	62.00	@ —
Sheets	67.00	@ —
Side Runs	47.00	@52.00
Boards—per ton—		
News	37.50	@40.00
Straw	52.50	@55.00
Chip	35.00	@37.50
Binders' Boards	65.00	@70.00
Wood Pulp	80.00	@85.00
65 Test Jute Liner	45.00	@47.50
85 Test Jute Liner	50.00	@55.00
Sgl. Mla. Lt. Chip	47.50	@50.00

Mechanical Pulp

(On Dock)

No. 1 Imported—		
Moist	30.00	@32.00
Dry	32.00	@34.00

(F. o. b. Mill)

No. 1 Domestic	26.00	@30.00
Screenings	15.00	@20.00

Chemical Pulp

(On Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.75	@ 4.25
Easy Bleaching	3.00	@ 3.15
No. 1 strong unbleached	2.75	@ 3.00
Mitscherlich unbleached	2.80	@ 3.25
No. 2 strong unbleached	2.40	@ 2.60
No. 1 Kraft	2.35	@ 2.65
No. 2 Kraft	2.30	@ 2.50
Sulphate—		
Bleached	3.60	@ 3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.40	@ 4.75
Easy Bleaching Sulphite	2.65	@ 3.00
News Sulphite	2.50	@ 2.70
Mitscherlich	3.00	@ 3.25
Kraft (Domestic)	2.10	@ 3.30
Soda Bleached	3.10	@ 3.25
Sulphate Screenings—		
Coarse	.75	@ .95
Refined	1.65	@ 1.85

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1	11.00	@11.50
New White, No. 2	8.00	@ 8.50
Silesias No. 1	7.50	@ 8.00
New Unbleached	11.00	@11.50
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Blue Overall	7.50	@ 8.00
Washables	4.75	@ 5.25
Fancy	5.75	@ 6.25
Mixed Khaki Cuttings	4.75	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O. D. Khaki Cuttings	5.15	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rags

White, No. 1—		
Repacked	5.50	@ 6.00
Miscellaneous	4.50	@ 5.00
White, No. 2—		
Repacked	3.00	@ 3.50
Miscellaneous	2.50	@ 2.75
St. Soiled, White	2.00	@ 2.15
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.70	@ 1.80
No. 1	1.70	@ 1.80
No. 2	1.55	@ 1.65
No. 3	1.30	@ 1.40
No. 4	1.25	@ 1.35
No. 5A	.90	@ 1.05

Foreign Rags

New Rags

New Dark Cuttings	2.50	@ 3.00
New Mixed Cuttings	2.75	@ 3.25
New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.50	@ 8.00
Unbleached Cuttings	10.00	@11.00
New White Cuttings	10.00	@10.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50

Old Rags

No. 1 White Linens	7.50	@ 8.25
No. 2 White Linens	5.75	@ 6.75
No. 3 White Linens	4.75	@ 5.25
No. 4 White Linens	3.00	@ 3.50
No. 1 White Cotton	5.50	@ 6.50
No. 2 White Cotton	4.50	@ 5.50
No. 3 White Cotton	3.00	@ 4.00
No. 4 White Cotton	1.90	@ 2.15
Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med. Light Prints	2.00	@ 2.10
Dutch Blue Cottons	2.25	@ 2.40
French Blue Linens	2.75	@ 2.85
German Blue Linens	2.35	@ 2.55
German Blue Cottons	2.15	@ 2.25
Checks and Blues	1.85	@ 2.00
Lindsay Garments	1.85	@ 1.95
Dark Cottons	1.55	@ 1.60
Old Shopperies	1.50	@ 1.55
New Shopperies	1.50	@ 1.55
French Blues	2.10	@ 2.25

Old Rope and Bagging

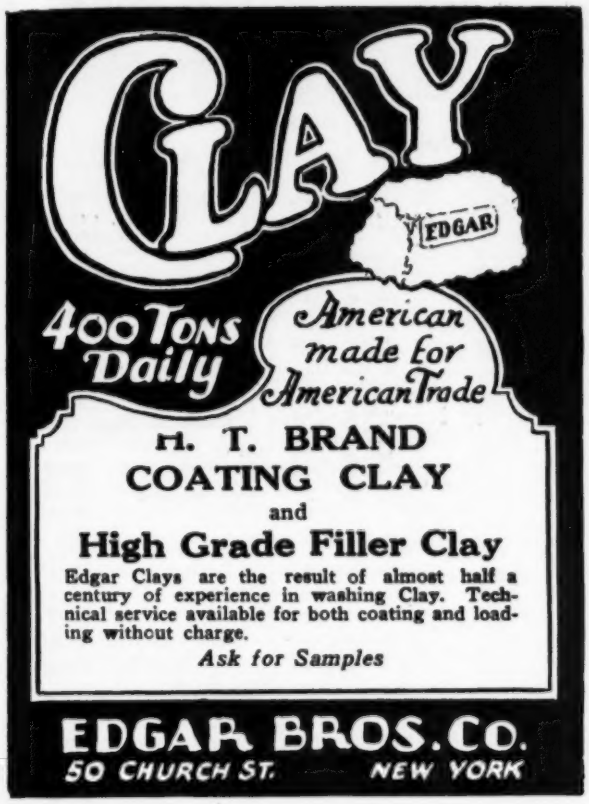
(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—		
Foreign	1.50	@ 1.60
Domestic	1.60	@ 1.70
Wool Tares, light	1.60	@ 1.65
Wool Tares, Heavy	1.60	@ 1.70
Bright Bagging	1.60	@ 1.70
Small Mixed Rope	1.25	@ 1.40
Manila Rope—		
Foreign	4.40	@ 4.60
Domestic	4.75	@ 5.00
New Burlap Cut	2.75	@ 3.00
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, white, No. 1	3.00	@ 3.25
Hard, white, No. 2	2.40	@ 2.55
Soft, White, No. 1	2.30	@ 2.45
White envelope cuttings	2.90	@ 3.10
Flat Stock—		
Stitchless	1.45	@ 1.55
Overissue Mag.	1.45	@ 1.55
Solid Flat Book	1.40	@ 1.50
Crumpled No. 1	1.00	@ 1.10
Solid Book Ledger	2.00	@ 2.10
Ledger Stock	1.40	@ 1.50
New B. B. Chips	.45	@ .55
Manilas—		
New Env. Cut	2.40	@ 2.60
New Cuttings	1.50	@ 1.75
Extra No. 1 old	1.25	@ 1.35
Print	.60	@ .65
Container	.45	@ .50
Bogus Wrapper	.65	@ .70
Old Kraft Machine Compressed bales	1.65	@ 1.75
News—		
No. 1 White News	1.65	@ 1.75
Strictly Overissue	.65	@ .70
Strictly Folded	.55	@ .60
No. 1 Mixed Paper	.35	@ .40
Common Paper	.20	@ .25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Quarries
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Twines
(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.19	@	.21
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.16	@	.17
Fine Tube Yarn—			
5-ply and larger	.21	@	.25
4-ply	.25	@	.29
3-ply	.28	@	.32
Unfinished India—			
Basis	.13	@	.14
Paper Makers Twine			
Balls	.11	@	.12
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.17	@	.19
Amer. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.14	@	.16
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Rope	.22	@	.24

CHICAGO

Paper
(F. o. b. Mill)

Rag Bond	.30	@	.53¼
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¼
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.06¼	@	.06½
Southern Kraft	4.25	@	4.50
No. 2 Kraft	.04	@	.04¼
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¼
White Tissue—			
20x30 Sheet	.07¼	@	.07½
(Delivered Central Territory)			
News, per ton—			
Rolls, contract	62.00	@	—
Sheets	67.00	@	—
Boards, per ton—			
Plain Chip	37.50	@	42.50
Solid News	47.50	@	—
Solid News	40.00	@	45.00
Manila Lined Chip	50.00	@	55.00
Container Lined—			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.20	@	2.25
White Env. Cuttings	2.40	@	2.50
No. 1 Soft Shavings	2.00	@	2.10
No. 1 Mixed	.90	@	1.00
No. 2 Mixed	.70	@	.75
Ledger & Writings	1.25	@	1.35
Solid Books	1.10	@	1.15
Blanks	1.40	@	1.50
Krafts	1.60	@	1.75
New Kraft Cuts	2.15	@	2.25
Manila Envelope Cuttings	1.65	@	1.75
Ex. No. 1 Manila	1.30	@	1.45
Print Manila	.70	@	.75
Folded News (overissue)	.75	@	.80
Old Newspapers—			
No. 1	.65	@	.70
No. 2	.60	@	.65
Mixed Papers—			
No. 1	.50	@	.60
Roonng Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(F. o. b. Mill)

Bonds	.06	@	.40
Ledgers	.09	@	.40
Writings—			
Superfine	.12½	@	.18
Extra fine	.18	@	.22
Fine	.17	@	.26
Fine, No. 2	.15	@	.25
Fine, No. 3	.10	@	.20
Book, M. F.	.05½	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.09½	@	.16
Coated Lithograph	.07	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.08	@	.09
Manila Sul., No. 1	.04	@	.05½
Manila No. 2	.03	@	.04
No. 2 Kraft	.06	@	.06½
No. 1 Kraft	.06½	@	.07
Common Bogus	.03½	@	.04
(Delivered Philadelphia)			
News Print Rolls	62.00	@	—
Straw Board	52.50	@	75.00
News Board	40.00	@	40.00
Chip Board	38.00	@	40.00
Wood Pulp Board	85.00	@	95.00
Binder Boards—			
No. 1, per ton	75.00		
No. 2, per ton	70.00		
Carload lots	68.00	@	70.00
Tarred Felts—			
Regular	55.50	@	57.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.25

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10½	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07	@	.09
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Blue Overall	.07½	@	.08
Cottons—According to grades—			
Washable, No. 2	.03	@	—
New Blue	.01	@	.01½
Fancy	.05½	@	.06
New Black Soft	.05	@	.05¾
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03½
New Canvas	.08½	@	.09
New Black Mixed	.03¾	@	.04½

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.50	@	1.60
Domestic	1.75	@	—
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.10	@	1.20
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.20	@	3.25
No. 2 Hard White	2.75	@	3.00
No. 1 Soft White	2.80	@	2.90
No. 2 Soft White	1.80	@	1.90
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.85	@	1.90
Writing Paper	1.60	@	1.65
No. 1 Books, heavy	1.40	@	1.50
No. 2 Books, light	1.05	@	1.15
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	.95	@	1.00
Container Manila	.85	@	.90
Old Kraft	2.25	@	2.50
Common paper	.50	@	.55
No. 1 Mixed Paper	.60	@	.65
Straw Board, Chip	.60	@	.65
Binders Board, Chip	.60	@	.65
Overissue News	.80	@	.85
Old Newspaper	.50	@	.55

Domestic Rags (Old)

White, No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
White, No. 2	2.00	@	2.25
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.65	@	1.75
Repacked	.01¼	@	.01
No. 2	1.30	@	1.35
No. 3 (Roofing)	1.15	@	1.25
No. 4	1.00	@	1.15
No. 5A	.75	@	.85
B	.65	@	.75
C	.65	@	.75

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.12½
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.06½	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05½	@	.08½
Book, Coated	.08½	@	.18
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.06¼	@	.06½
No. 2 Kraft	.04½	@	.05½
Common Bogus	.02	@	.02¾
Delivered New England points			
News Print Rolls	61.50	@	—
Straw Boards, rolls .009			52.50
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	37.50	@	40.00
Chip Board	35.00	@	37.50
Single Manila Lined Chip	50.00	@	—
Single White, Patent Coated Newsboard			
Bender	65.00	@	80.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	70.00	@	75.00

(F. o. b. Mill)

Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.40	@	2.50
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	2.35	@	2.45
No. 1 Books, Heavy	1.50	@	1.55
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	.90	@	1.00
White Blank News	1.50	@	1.60
Old Kraft	.165	@	1.85
Print Manila	.80	@	90
No. 1 Mixed Paper	.45	@	.50
Overissue News	.70	@	.75
Old Newspapers	.50	@	.55
Box Board, Chip	.55	@	.60

Bagging
(F. o. b. Boston)

Gunny No. 1—			
Foreign	1.40	@	1.50
Manila Rope—			
Foreign	4.37½	@	4.50
Domestic	4.50	@	4.75
Transmission Rope	—	@	3.00
Mixed Strings	1.00	@	—
Jute Wool Strings	1.00	@	1.05
Jute Carpet Threads	1.05	@	1.15
Scrap Burlaps	1.37½	@	1.50
Scrap Sisal	1.80	@	2.00
Scrap Sisal for shredding	1.85	@	2.00
Wool Tares, heavy	1.60	@	—
New Burlap Cutting	1.90	@	2.00
Australian Wool Pouches	3.00	@	3.12½

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.09½	@	.10
Silesias, No. 1	.06	@	.06¼
New Unbleached	.10	@	.10½
Fancy	.04	@	.04½
Washable	.04	@	.04½
Cottons—According to grades			
Blue Overalls	.06¼	@	.06¾
New Black, soft	.04	@	.04¾
Khaki Cuttings	.04	@	.04¾
O. D. Khaki	.05	@	—
Corduroy	.03	@	.03¾
New Canvas	.08	@	.08½

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	2.75	@	3.00
Thirds and Blues—			
Repacked	2.25	@	2.50
Miscellaneous	1.75	@	1.90
Black Stockings	—	@	4.00
Roofing Stock—			
No. 1	1.65	@	1.75
No. 2	1.45	@	1.55
No. 3	1.05	@	1.10
No. 4	1.10	@	1.15

Foreign Rags
(F. o. b. Boston)

Dark Cottons	—	@	1.55
New No. 1 Shirt Cuttings	9.00	@	9.50
Dutch Blues	2.00	@	2.12½
Lace Curtains	4.75	@	5.00
New Checks & Blues	4.25	@	4.60
Old Fustians	1.90	@	2.00
Old Linsey Garments	1.80	@	1.85

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12¼	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
Book—			
No. 1 M. F. (carloads)	7.50	@	
No. 2 M. F. (carloads)	7.25	@	
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	13.25	@	—
No. 2 Coated and Litho	12.25	@	—
No. 3 Coated and Litho	11.50	@	—
Coated tinted	14.50	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.80	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.00	@	—

(Delivered Toronto)

News, per ton—			
Rolls (contract)	61.50	@	62.00
Sheets	67.00	@	—

Pulp
(F. o. b. Mill)

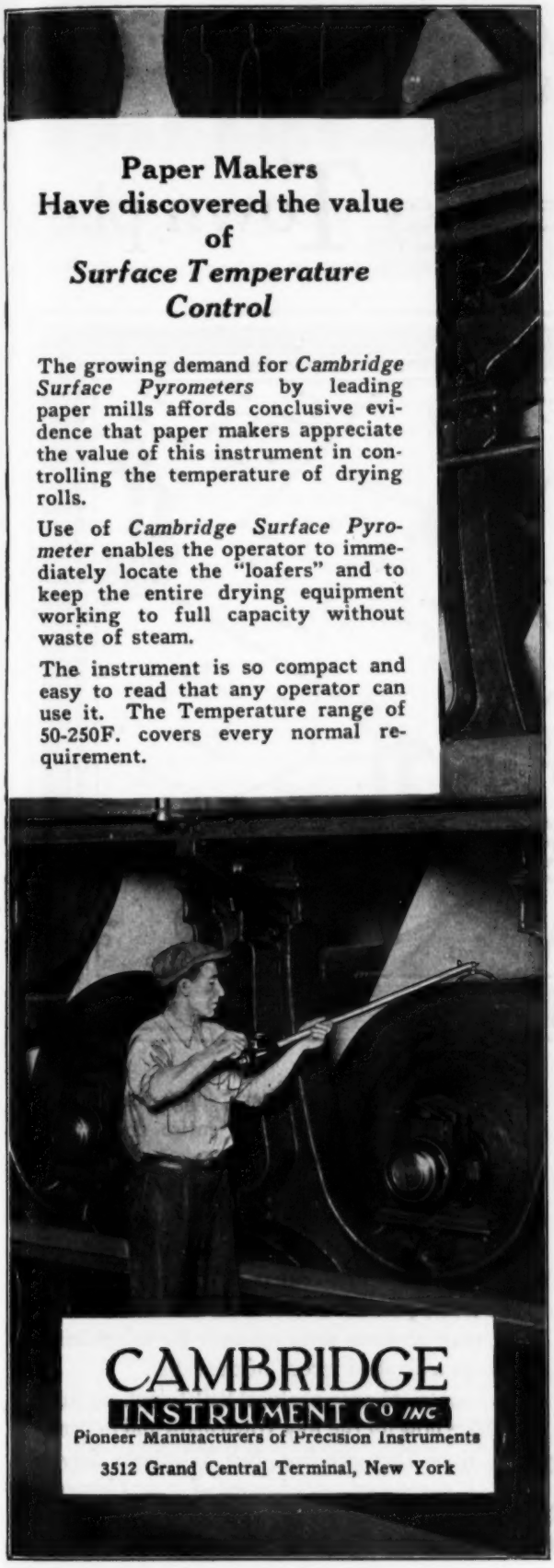
Ground Wood	30.00	@	31.00
Sulphite easy bleaching	60.00	@	—
Sulphite news grade	60.00	@	—
Sulphite, bleached	77.00	@	78.00
Sulphate	60.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.85	@	—
Strictly Folded	.85	@	—
No. 1 Mixed Paper	.65	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.09¾	@	.10
Fancy Shirt Cuttings	.06	@	.06¼



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PAPER TRADE JOURNAL

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THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

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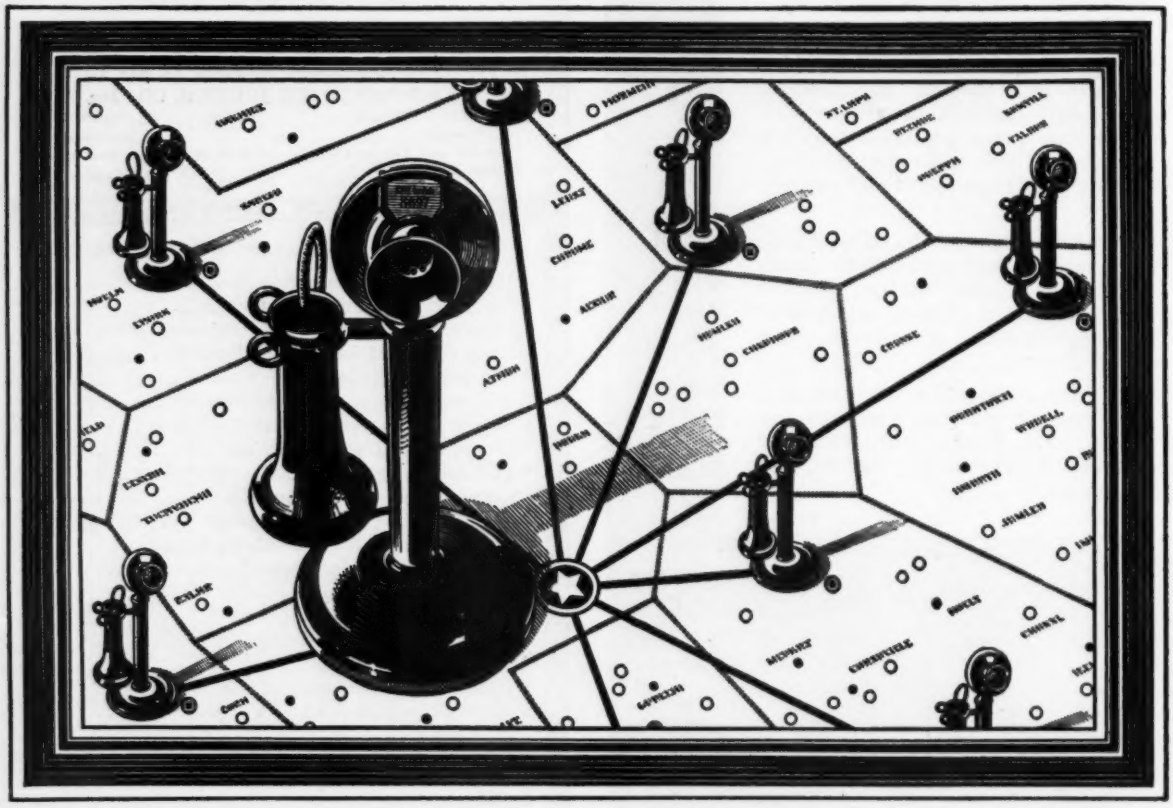
Cover your Sales areas by Telephone... the Key Town plan



THE modern way to keep in touch with customers is by telephone from centrally located towns. For information and arrangements about the Key Town plan, go right to your local Bell Telephone Business Office.

A soap salesman went to the telephone office in Forest City, Arkansas, and placed 30 calls to 10 surrounding towns.

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